









"OMAR," FAMOUS IMPORTED PERSIAN CHINCHILLA.

Property of

Miss A. L. Pollard, Omar Cattery, Elizabeth, N. J.

THE DISEASES OF THE CAT

BY

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‘THE MANAGEMENT AND DISEASES OF THE DOG,’ ‘THE PRINCIPLES AND
PRACTICE OF BOVINE MEDICINE AND SURGERY,’ ETC., ETC.



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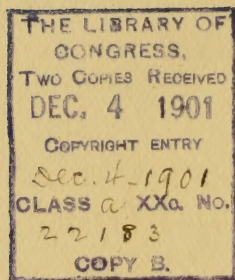
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TO ALL THOSE INTERESTED

IN THE

PROTECTION AND WELFARE OF THE FELINE RACE

THIS WORK

IS

RESPECTFULLY DEDICATED

BY THE AUTHOR

PREFACE

NUMEROUS and repeated requests have induced the Author to issue this Manual, written from the experience of many years' practice and close pathological research into the maladies to which our domesticated feline friends are liable—a subject which it must be admitted has not found that prominence in Veterinary literature to which it is undoubtedly entitled.

The block on the cover represents the head of Miss Ava L. Pollard's famous Chinchilla stud cat "Omar," one of the finest Persians that has ever left the shores of the old country for America.

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DISEASES OF THE CAT

CHAPTER I

INTRODUCTORY

ABANDONED CATS—FEEDING—WASHING—DISEASES
—ADMINISTRATION OF MEDICINE—DESTRUCTION
—DISINFECTION.

Abandoned Cats.

IT is a proverbial saying that 'a cat has nine lives,' but in the light of experience and general observation it might with some truth be put at ninety-and-nine, if the struggle for life of the abandoned cat in London and other large towns and its many narrow escapes from violent death are taken into account. 'A cat can get its own living' is a remark constantly heard. Yes, in some instances true—but how? By enforced thieving through starvation—a lesson inculcated, shall I say? by unintentional thoughtlessness, or ignorance on the part of the householder, or wilful blindness as to the necessary means of sustaining animal life when the mansion doors are closed, and the hitherto happy, purring feline is left homeless, comfortless, and foodless to shift as best it

may. Neither mice nor birds patiently await the hungry cat, and in the absence of both and any other food the natural craving of the stomach leads to the inevitable: the hungered animal if possible helps itself, and not always from the best larder, but from a source impregnated with filth and disease.

It is refined cruelty to invite the affection of any domesticated creature, treat it accordingly, and then for convenience' sake or selfishness submit it to the reverse. Yet year by year may be seen countless victims of such treatment in the West End of our leading capital, and more or less in all towns. The necessary household cat, the watchful guardian against mouse invasion, a distinctly valuable servant, is left when the family go, maybe for their own pleasure, with a reward of starvation, and often worse.

My estimation of such people is too damnatory to word in these pages. The abrupt suppression of every comfort to a creature that has been solely utilized for the benefit of its owner is fiendish. It is only the unremitting attention and watchfulness of humanitarians that brings alleviation and comfort to these poor suffering creatures; hence the necessity of supporting those philanthropic homes which have been generously provided for outcast animals, notably the one opened by the Society for the Protection of Cats at Hammersmith; the Dublin Home for Starving and Forsaken Cats, founded by Miss Swifte in 1885; the Mayhew Home, with new hospitals attached, established in 1894 at College Park, Harrow Road, N.W., which is a compact and charming abode for felines, whether strays, abandoned, sick, or boarders;

and last, but not least, the well-ordered Home for Cats at Battersea, a department which continues to perform its work in a praiseworthy manner, especially in the avoidance of immediate slaughter (an unjustifiable act unless under exceptional circumstances), and for which is substituted prolonged detention and care in the hope of friendly purchasers coming forward.

In that chatty and entertaining little journal *Our Cats*, these institutions are fully announced and their claims set forth. By the way, I find our feline friends and cat-owners generally are indebted to the promoter of *Our Cats* for providing a cheap and the only publication of the kind exclusively devoted to the feline fancy, and which can in all truth now be called 'the recognised organ.'*

Feeding.

The ordinary household cat is as a rule satisfied with a reasonable supply of pure milk and kitchen or table scraps. Being a carnivorous animal, flesh, though not absolutely essential, should be allowed in moderation. Fish also is beneficial and greatly relished. Boiled liver as a daily fare I do not approve of; it is indigestible, an irritant laxative, and not very nutritious. Sound horse flesh is suitable as an occasional change, but not as a persistent diet.

Cats are usually fond of fried bacon, also the liquor from it; the latter, like the oil in tinned sardines, is a good substitute for cod-liver-oil in wasting disease. Grass is also enjoyed by cats, and

* Published at 5, Great James Street, Bedford Row, W.C.

it is not an uncommon thing in the absence of it to see pussy nibbling the plants, especially ferns. Some cats have peculiar tastes for what would naturally be considered unsuitable food, to wit, tomatoes and cucumbers, especially the rind of the latter. I recollect as a boy one of the household cats at home being particularly partial to cucumber. Many similar instances have since then come under my notice, and at the present time a young short-haired black neuter of my own has developed a similar taste, eating both vegetables readily.

In addition to the ordinary method of feeding, 'Feline Food' has been placed before the public in packet form; but the 'Prepared Cat Food' which in my opinion has the best claim to the title is that manufactured by Walker, Harrison and Garthwaite, Limited, at the Phoenix Biscuit Works, Ratcliffe Cross, E. The ingredients, which I have thoroughly examined, tested, and apportioned, being pure, wholesome, and adapted to the requirements of the feline stomach, form a suitable diet for all cats where any special invalid food is not necessitated. A great feature in W., H. and G.'s prepared food is its easy digestibility and assimilation. Cats, especially show specimens, thrive well on it, improve in condition, and retain the lustre of coat so necessary in exhibits. Being handy, convenient, cleanly, and inexpensive should bring the preparation into general favour with the feline fancy. Full instructions accompany each packet.

Cats will also eat dog-biscuits of certain kinds with relish; indeed, I have known instances where they have been fed exclusively on my patent dog-

biscuit manufactured by the above firm, and, being rich in nourishment, they thrive amazingly on this diet, the biscuit being simply broken up small and scalded with either water or milk.

Anent liquid meat dietetics, many preparations are in use, and chiefly as restoratives during invalidism. In cases of gastric irritability in the cat, especially when accompanied by vomiting and inability to retain essential nourishment, I have found Kreochyle of exceptional advantage, its absorption being so rapid that if given frequently in small quantities pleasing results have been speedily evident, the secret being that the troubled stomach is allowed the rest necessary, whilst at the same time the system is being supported by suitable nutriment in a minimized yet adequate and agreeable form.

In feline distemper and gastritis it is a very safe and efficacious dietary and an excellent restorative pick-me-up in debility and emaciation; indeed, I have frequently found in dealing with the latter conditions the best and most satisfactory thing to prescribe is a bottle of Kreochyle, a teaspoonful to be given three or four times daily, and, what is better, the patient after a dose or two, and sometimes from the onset, will lap it voluntarily. It is therefore a useful preparation to have in catteries and at cat shows.

Washing.

Cats seldom, if ever, like being bathed, yet I have known instances where puss has had a daily ablution as regularly as its mistress, and have been assured it was equally enjoyed, which I am nevertheless afraid

is open to doubt. By a wise provision of Nature, the cat is provided with a tongue that embraces all the adjuncts necessary to feline toilet, and puss may safely be trusted to look after its own good appearance without artificial aid. Add to which cats do undoubtedly dislike to even tread in wet. Still, I do not condemn an occasional bath of tepid water, provided the animal is thoroughly dried afterwards and well brushed, and water not allowed to linger in the ears, which not only creates great discomfort and irritation, but often leads to canker and deafness. Of course, in some cases of skin disease washing is essential. Again, cats have a great dislike to soap, and therefore when used it should be employed sparingly and free from any carbolic agent. Good yellow or curd soap is the best, and for antiseptic purposes chinosol soap.

Diseases.

The diseases of the cat, though very scantily and superficially dealt with in what little literature exists at the time of writing these pages, are very numerous. Many morbid and contagious feline affections arise from scavenging. Cats left to forage for themselves or on their own account, as already alluded to, will pay visits to refuse-tubs and other obnoxious receptacles, not only to their own danger, but also to that of the human family, innumerable instances of which are on record.

A point to be remembered in treating the diseases of the cat, and, in fact, all domestic animals, is that Nature herself should be credited with some degree of power in effecting a cure. This is not sufficiently

estimated in veterinary or human medicine. Here, probably, lies the secret of homœopathy. ‘And yet, what is the character of the results obtained under this system of imaginary medication in the cure of diseases? When fairly weighed, do not these results exhibit, if not quite as large a proportion of cures as ordinary medicine, still so large a proportion as to demonstrate at once the feebleness of what we regard as the last form of *Art*, and the immense strength of *Nature* in the same office?’ (Sir John Forbes, M.D.).

Administration of Medicine.

Though the cat is not usually so amenable to the administration of medicine as the dog, yet I have seldom experienced any difficulty in the matter. I neither advise rolling the animal up, in a shawl with its head out, nor putting its tail first down a top-boot. A cloth or towel across the breast to prevent the claws interfering with the operation is all that is necessary. The animal should then be gently but firmly held with the chin up, and the angle of the mouth quietly drawn out whilst an attendant pours the medicine into the pouch formed. If powders are given, the mouth may be gently forced open and the powder placed on the base of the tongue. The same will apply to pills, which should be of the smallest bulk possible. Sulphur or bismuth can be placed in milk, or mixed with a little chopped meat or fish.

In fact, gentleness, persuasion, tact, experience, and courage, are, as in dealing with dogs, important factors in the medical treatment of cats. Animals

are frequently half choked, and sometimes completely asphyxiated, by having their jaws rudely opened wide and an excessive quantity of fluid poured down the throat all at once, without allowing time to swallow; or, on the other hand, by administering the medicine whilst the patient is gasping or in the act of coughing, and this is an accident more likely to happen when the creature is rolled tightly up in a shawl and terrified by its imprisoned condition and the pressure often applied in holding it.

Destruction.

There is a time to live and a time to die, and when the latter becomes necessary or compulsory, death should be accomplished in the most merciful and painless manner. For years past I have adopted the administration of chloroform, and still do so. Thousands of kittens are annually born to misery and starvation, and, to her credit, one lady at St. Leonards-on-Sea, bearing this fact in mind, used to send to me all her superfluous feline progeny to be anæsthetized and afterwards buried in her garden rather than they should face the probabilities of cruelty and neglect. Her humane example might be very wisely followed, especially in London and other great centres. The *modus operandi* is very simple: Enclose the newly-born kittens in an ordinary biscuit tin with a sponge soaked with methylated chloroform, and in half an hour they will have slept their final sleep. With adult cats I usually administer a dose of chloral hydrate, and when the animal is asleep complete with chloroform. For a speedy and almost instantaneous death, the inter-

costal injection of hydrocyanic acid stands pre-eminent; but individually, in all cases, I prefer anæsthesia. But even in the employment of anæsthesia judgment and humanity must be exercised. Where cats in numbers are to be thus disposed of, ample space should be provided. Cramming cats into a confined space, and pouring in chloroform through an aperture, is the reverse of humanity. In a word, there is as much cruelty in improperly anæsthetizing cats as there is in slowly suffocating them by strangulation; and the object of the *professed merciful* extinguisher of animal life should be strictly directed to alleviation in the most minute degree of all suffering. I recently inspected a so-called lethal box for cats that simply horrified me. *There can be no humanity where there is no feeling*, and, to quote an ancient proverb, 'There is a difference between living long and suffering long.' The latter I would commend as the motto for all philanthropic animal societies.

Disinfection.

There are so many so-called disinfectants advertised that perhaps it may seem invidious to call particular attention to any one. Nevertheless, my experience in cat practice has led me to the conclusion that it is to the advantage of the feline fancy to point out in my opinion the most efficacious one. In feline hospitals or catteries a proper system of disinfection is of the highest sanitary importance. In the section of this work on Ophthalmia, I have drawn attention to attacks of this complaint following shows in which the disinfective measures have

been too pungent. It is a notable fact that carbolic preparations have to be used with the greatest care where cats are concerned, and that many cases of fatality have occurred through their indiscriminate use. It is therefore that I give preference to a product capable of absorbing, deodorizing, and sterilizing any organisms arising from septic discharges, and these properties I have found to be embraced in Petanelle Powder, which is a compound antiseptic, disinfectant, and deodorant, derived from peat, and is an extremely pleasant and speedily effective agent, both in sickness and for scattering over urinal and fæcal evacuations, the effluvia from which in cats is so offensive. The Petanelle Liquid Disinfectant is of equal efficacy.



CHINCHILLA 'MOWGLI.'

THE PROPERTY OF MRS. DEAN.

(From a photograph by E. Landor, Ealing.)

CHAPTER II

DISEASES OF THE RESPIRATORY ORGANS

CATARRH—INFLUENZA—BRONCHITIS—ASTHMA—
PLEURISY—PNEUMONIA—CONSUMPTION.

Catarrh.

THIS affection, generally known as ‘cold in the head,’ is indicated by a watery or mucoid discharge from the eyes and nose, due to a febrile or inflammatory condition of the mucous membrane of the nasal chambers, and usually the frontal sinuses, which may arise from damp, cold, or contagion.

Symptoms.—Nasal and lachrymal discharge, frequent sneezing, sometimes cough, dulness, and inclination for quietude or warmth.

Treatment.—Careful regard to warmth, comfort, and simple medical treatment generally suffice to effect a cure.

Spts. æther. nit.	...	...	2 drachms.
Aqua camph.	...	...	4 ounces.

A teaspoonful twice or thrice daily.

Steaming the head with an infusion of poppy-heads will afford soothing relief if the head is very

stuffy through the facial sinuses becoming blocked with collected discharge. Warm milk is the most suitable diet, and if refused should be administered by spoon from time to time. Warmth and comfort should be observed.

Influenza.

This may be termed an aggravated form of the previous malady, and is of a more highly contagious character.

Symptoms.—Great lassitude, injected eyeballs and lids, abundant discharge from the nose, at first watery, and subsequently muco-purulent. Hurried respiration, sneezing, coughing, and increased temperature, with quickened pulse. Sometimes the throat is swollen. The coat is harsh and staring. If the disease is allowed to proceed chest complications usually follow.

Treatment.—At the onset the measures prescribed for catarrh may be adopted, and when extreme debility is manifested, ammoniated tincture of quinine in 2 or 3 minim doses, or Parish's Chemical Food 20 minims in a teaspoonful of water, or beef-tea, may be given twice or thrice daily, with nourishing warm diet. It should be especially borne in mind that cats with respiratory affections always seek warmth and comfort.

Bronchitis.

Cats, notably those turned out of doors and exposed to damp and cold, after being accustomed to warmth and household care, are frequently the

subject of bronchial disease—*i.e.*, inflammation of the mucous membrane lining the bronchial tubes, which may be confined to the large bronchi, or extend to the smaller or subdivided ones, and thence to the lung texture.

Symptoms.—Quick, wheezing respiration, attended with frequent coughing and retching, and frothy expectoration, sometimes tinged with blood. The eyes are red and inflamed, heart-beats rapid. On auscultation a mucous rattle is heard. There is usually nasal discharge and sneezing. The animal becomes prostrate, and unless relieved ultimately succumbs to exhaustion, bronchial pneumonia, or asphyxia. Bronchitis may arise from irritating inhalations, notably lime-dust, several cases of which have come under my notice.

Treatment.—At once place the patient in a warm atmosphere—65° to 70° F.—which may with advantage be moistened with a sedative steam evolved from an ordinary human bronchitis kettle, into which place two or three bruised poppy-heads. An emetic, $\frac{1}{2}$ to 1 grain of tartarized antimony, or 30 to 60 minims of ipecacuanha wine, is beneficial, especially in threatened asphyxia from the accumulation of mucus in the bronchial tubes. After the action of the emetic, the following mixture may be used:

Spts. æther. nit.	...	...	4 drachms.
Liq. ammon. acetat.	...	...	1 ounce.
Aqua camph.	...	...	4 ounces.

A teaspoonful every four hours to an adult cat, half to a medium-grown one.

To relieve the cough when very troublesome, as a demulcent and expectorant, I advise a mixture of:

Chlorodyne	...	...	1 drachm.
Syrup of squills	...	...	2 drachms.
Glycerine	...	...	2 ounces.

Half to one teaspoonful to be given occasionally with a teaspoonful of barley-water or linseed-tea.

Hot linseed poultices to the front of the chest are desirable in severe cases. Warm broth, beef-tea, milk, and arrowroot form the most suitable diet. Subsequently cod-liver-oil as a recuperative agent is of great value.

Aged cats, like aged human beings, are subject, especially after an attack of bronchitis, to what is termed 'winter cough.' Although often more or less present after a severe bronchial seizure, the cough increases in frequency and severity during the winter, and particularly in foggy weather. The cough is of a *husky* asthmatical character, accompanied with shortness of breath, and frequently expectoration and retching. The cough mixture prescribed for bronchitis is applicable here, and the same measures for protection against damp and cold must be observed.

Terebene inhalations are also of great service.

Asthma.

Aged cats are those most frequently affected with asthma, which arises from congestion of the mucous membrane of the bronchial tubes, or it

may be associated with bronchial catarrh. As in dogs, it is usually met with in overfed, pampered animals.

Symptoms.—The breathing is laboured, heaving, and wheezing. In severe attacks the creature struggles for breath, and the eyes are prominent and bloodshot. Flatulency and constipation are usual accompaniments. Ammoniacal odours excite the symptoms, therefore it is not humane to turn a cat out of the house into the stable, which is not uncommonly done when the unfortunate puss becomes asthmatical.

Treatment.—Cure being impossible, attention must be directed to palliative measures. An emetic affords relief, as also do sedative inhalations. Constipation must be especially avoided, and as a mechanical laxative nothing fulfils the purpose better than a teaspoonful or two of salad-oil. Small doses of vegetable charcoal are useful, and in severe cases, when sudden paroxysms occur (spasmodic asthma), 1 to 2 grains of iodide of potassium, with 3 to 6 minims of tincture of belladonna in a teaspoonful of brandy and water, will often relieve the spasm.

Pleurisy.

Inflammation of the pleura—*i.e.*, the serous membrane which covers the lungs and inner surface of the chest—is a disease which may arise from cold, external violence, intercostal wounds, or fractured ribs. On more than one occasion I have known it follow from the animal being crushed in a closing door, and also from the grip of a dog. Pleurisy may

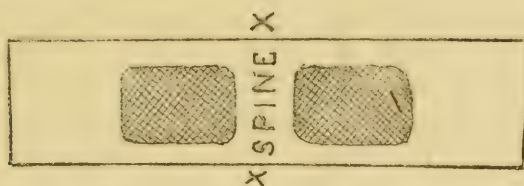
be single or double—*i.e.*, affect one or both sides—and may be, and often is, apart from the previously-named causes, associated with pneumonia (pleuropneumonia). Effusion into the thoracic cavity generally takes place.

Symptoms.—Febrile disturbance, with frequent shiverings; short, catching respiration, which is due to the pain caused by dilatation of the ribs and consequent tension on the inflamed pleura. Heaving at the flank is also observable in consequence of the abdominal muscles being brought into play to assist the breathing. There is a dry, suppressed cough. The skin is hot, eyes bright and watery, conjunctival membrane deeply injected, tongue white and dry, a hard rapid pulse. As the inflammatory action proceeds the symptoms increase in severity, pressure over the ribs causes intense pain, and the suffering creature cannot even bear to be lifted up. The countenance becomes haggard and anxious. As the effusion in the chest increases the breathing is more laboured, and death generally results from asphyxia.

Chronic pleurisy is usually associated with effusion which has terminated in adhesion.

Treatment. — Prompt measures are necessary. Counter-irritation to the sides of the chest, in the form of repeated hot linseed and mustard poultices—one tablespoonful of mustard to three of linseed—or some stimulating liniment, should without delay be had recourse to. I prefer poultices, and so does the patient. These should reach from the spine to the lower part of the girth; if applied the reverse way—*i.e.*, from underneath upwards—they are liable to slip

down. They should be spread in two squares between thin muslin, thus—



the space marked \times going on the spine, and the poultice falling down on either side of the chest. A roller bandage should then be applied to keep the poultices well to the sides, and the patient placed on a soft bed in a comfortable closed basket and kept warm and quiet. In severely acute cases of pleurisy, I consider it advisable to clip the fur off the sides before poulticing. The diet should consist of good broth, beef-tea, or Valentine's meat-juice, varied with warm milk in small quantities frequently given. Half to a teaspoonful of brandy in a little water or milk is the best stimulant when required, and as a tonic during convalescence Parish's Chemical Food and cod-liver-oil.

Where there is considerable effusion in the chest cavity, tapping may be had recourse to as a *dernier ressort*; but at this stage the case is frequently past recovery. Painting the sides with iodine liniment, and the administration of iodide of potassium in 5 to 10 grain doses, are serviceable in promoting absorption of the thoracic fluid; but when lymph organization and adhesions have taken place, and the constant risk of taking cold is considered, puss's life is scarcely worth prolonging.

Pneumonia.

Inflammation of the lungs is one of the most serious chest affections to which the cat is liable. Pneumonia may be single or double—*i.e.*, one or both lungs may be involved. The disease has three stages, and, without desiring to be technical (my chief object being to assist the amateur), I may state these stages are termed: (1) Engorgement or congestion; (2) red hepatization: (3) gray hepatization or purulent infiltration.

Symptoms.—The usual preliminaries are frequent shiverings and general febrile disturbance, denoted by increased temperature and high pulse. The breathing is observed to be short and gasping, and an irritable cough is present. The eyes are usually red, and the nose is hot and dry. On placing the ear to the animal's side increased lung sounds are heard, which ultimately become obliterated as the disease proceeds, and are replaced by a crackling or crepitating noise. When this is lost, and only a slight wheezing or whistling can be heard, the second stage (red hepatization) has been reached, and, owing to consolidation of the lung, a flat, dead sound is produced on percussion. At this period the cough is very frequent, and accompanied by rusty expectoration. In breathing the cheeks are inflated or puffed out, and the inspirations extremely short and rapid. The animal frequently sits upon its haunches with the elbows outwardly inclined, an effort to widen, as it were, the capacity of the chest for the ingress of air to the choked lungs. In the third stage, when the lung tissue breaks down, a bubbling or gurgling

sound is heard on auscultation, which is caused by the air passing through pus. The breath becomes exceedingly foetid and cadaverous, whilst the cough is loose, with copious expectoration. The body and extremities are cold, the pulse almost imperceptible, and the poor sufferer, with its pinched, haggard face and sunken eyes, presents a pitiable object.

Treatment.—This consists in active counter-irritation to the sides of the chest, diffusible stimulants, bodily warmth, free ventilation, and nourishing food. In these cases it is better to clip the fur from where the counter-irritant is to be applied, as speedy action is most essential; and then either hot linseed and mustard poultices, stimulating liniment, or, what is better still in cases of emergency, flannel wrung out of hot mustard-water should be wrapped round the chest, and be surrounded with wadding on a dry flannel bandage. This may be kept on for three-quarters of an hour, and then followed with linseed poultices. Brandy and beef-tea, or raw meat-juice, may be given in small quantities at frequent intervals, also warm milk. Constipation is best relieved with salad-oil or warm gruel enemas. On no account should castor-oil or any other drastic purgative be given in pneumonia. Quietude is essential, and draughts, damp, and cold are to be strictly avoided. During convalescence iron and quinine and cod-liver-oil are beneficial. A coat or flannel bandage is advisable until the fur has grown again on the clipped surfaces.

Consumption.

Unfortunately, the feline race are amongst the victims of tubercular disease, which may be hereditary or acquired. The easy transmissibility of the disease has been pointed out by the author in his work on 'Bovine Medicine and Surgery' (1882); and both by inoculation and feeding on tubercular-infected milk, it has been clearly demonstrated the disease can be transmitted to the cat and other creatures.

Symptoms.—These do not materially differ from those observed in the dog. They may be enumerated as follows: Loss of flesh, cough easily produced by exertion, expectoration, short respiration, foetid breath, staring coat with easy detachment of fur, flatness behind the shoulder-blade, dulness on percussion, abdominal breathing, languidness, variable appetite, diarrhoea, crepitating lung sounds, gurgling and cadaverous respiration when the tubercle softens and the lung breaks down.

Treatment.—This can only be pursued with a view to prolong the animal's life. The removal of tuberculous deposit is impossible, but the progress of the disease may be arrested by active counter-irritation, or the application of iodine, cod-liver-oil and iron, nourishing food, and a pure atmosphere. Prohibition of breeding and intercourse are necessarily to be observed.

A form of consumption not unfrequently met with in kittens is that known as 'tabes mesenterica,' or abdominal consumption—*i.e.*, tubercular disease of the mesenteric glands. In such cases there is ab-

normal enlargement of the abdomen, with frequent and offensive diarrhœa. The animal, to use a vulgar expression, is 'pot-bellied.' The body is very much emaciated, and the coat ragged, dry, and harsh; the mucous membranes are pallid, and occasionally the gums are ulcerated.

Treatment.—Good hygiene, pure air, sun, nourishing food, mineral tonics, and cod-liver-oil are the measures indicated, but must be regarded as of no permanent benefit; indeed, it is far better and more humane to let consumptive cats, young or old, have a painless ticket to join the majority.

CHAPTER III

DISEASES OF THE STOMACH

INDIGESTION—VOMITING—WORMS—GASTRIC
CATARRH—GASTRITIS—GASTRO-ENTERITIS—FOREIGN
BODIES.

Indigestion.

LONG fasts and 'diet of any kind' would appear to provoke feline dyspepsia. Yet in the ordinary cat such a result is, comparatively speaking, rare, and is more often met with in highly-bred and notably show specimens, where a too fixed and stimulating system of feeding is adopted. Indigestion also arises from diseased teeth and imperfect mastication. The same unpleasant symptoms observable in dyspeptic canine subjects are present in the cat, viz., flatulency, acid eructations, offensive breath, constipation or diarrhœa, abdominal distension, vomiting, spasms, furred tongue, and sometimes husky cough.

Treatment.—The diet is usually the first matter to be considered, and if too rich and stimulating should be restricted to plain and easily digested materials. Milk with a third of lime-water has a marked corrective effect in these cases, and where there is much flatulence small doses of vegetable charcoal and



FULMER CHAMPION ZENOPHON.

Winner of 170 Firsts, Specials, Challenge Cups, etc.

THE PROPERTY OF LADY DECIES.

(From a photograph by E. Landor, Ealing.)

bismuth are serviceable. When the stomach has regained a healthy tone, the diet may be gradually increased in nutriment, but never suddenly. In abdominal distension with troublesome eructations, great comfort is afforded by gentle hand-rubbing, and warm-water enemas are useful if constipation is also present. The removal of loose, broken, or decayed teeth is necessarily indicated.

Vomiting.

Vomiting may result from an overloaded stomach, particularly if there has been long abstinence from food, and a rapid, heavy meal has been made; or it may be an indication of stomach affections, as gastritis and gastric catarrh, or arise from the presence of irritating matters within it—notably worms and other foreign agents, including poisons.

Vomiting is also associated with injuries and diseases of the throat, œsophageal obstruction, and various other disorders, including bowel stoppage and prolonged constipation. The vomit may be mucoid, bilious, sanguineous, or ingestal—mucoid when associated with gastric catarrh; bilious in connection with liver disturbance; sanguineous in gastritis, especially with ulceration and lesions of the mucous membrane; ingestal when mixed with food and other offending matters. When there is great irritability of the stomach, as in acute gastritis, and notably when ulceration is present, vomiting usually occurs immediately after food has been taken, whether voluntarily or administered. When it takes place in a cat in good health, it may fairly be attributed to indigestion or some irritant.

It is not at all unusual to see a cat vomit a mouse soon after devouring it, or even when partially digested, which doubtless arises from the irritability caused by some portion of the rodent's anatomy, probably its fine sharp claws.

In the numerous animals I receive from various parts of the country for post-mortem examination, many curious cases of gastric mischief are revealed. In the stomach of the cat it is most common to find, for instance, the foot of a rabbit or the head of a fowl partially digested, in which the claws of the former or the beak of the latter have played their part in setting up gastric irritation or inflammatory action; and the constant retching and vomiting, with gastric, enteric, and other associated symptoms prior to death, have frequently created the suspicion, not to an amateur unwarranted, that poison has been given or received.*

Not only the indigestible nature of the appendages of the rabbit's foot, but the irritation of the fur, especially in delicately bred cats, will produce the symptoms named; indeed, very active exertion after the ingestion of such a meal will give rise to vomiting. However, a properly fed cat in normal health seldom eats a rabbit's foot or fowl's head.

Treatment.—If vomiting occurs from an overloaded stomach, accumulation of bile, phlegm, mucus, irritating substances, or poisons, it should be encouraged rather than checked; but when associated with acute

* A scare of this description took place some years ago at Hastings, arising from a hare's foot being found in the stomach of a dog which had died from gastritis in the vicinity of a game and poultry shop.

gastritis, and especially ulceration, its abatement is indicated, and the necessary treatment will be found in dealing with these affections under their respective headings. When the vomit is foul and acid, ammonia, carbonate of soda, and charcoal are useful agents, with milk and lime-water diet. In all instances of abnormal sensitiveness of the stomach, it should be remembered that liquid or semi-liquid food is more easily digested than solid.

Worms.

These when present in the stomach give rise to severe gastric disturbance, great nervous excitement, and convulsions. (See Fits.) The species of worm present is the *Ascaris marginata*, or marginated round-worm. Retching, vomiting, foetid breath, enteric disturbance, colicky pains, emaciation, and frequent husky cough, are also among the symptoms manifested under the influence of worms which have found their way into the stomach of the cat.

Treatment.—This consists in expulsion of the pests, and for this purpose a vermifuge is obviously indicated: $\frac{1}{2}$ grain of santonine and 4 minims of oil of male fern in a teaspoonful of salad-oil should be given fasting, and one hour afterwards a little warm milk. The vermifuge may be repeated in two days. Sometimes an emetic of warm salt and mustard-water will cause the worms to be vomited, but it is advisable to increase the existing irritation of the stomach as little as possible. When the worms are expelled, a mucilaginous diet soothes the mucous membrane.

Gastric Catarrh.

This usually arises from irritating food and other deleterious matters in the stomach (not unfrequently worms), and may also be produced by exposure to cold, or be associated with chronic gastritis and indigestion. It sometimes accompanies or is a sequel of distemper.

Symptoms.—Nausea, with vomiting of mucus, or a clear viscid matter resembling the white of a raw egg. Depression, furred tongue, loss of appetite, and frequently thirst, are generally present. Often, however, after water has been lapped, it is thrown up again in a short time, either slightly frothy and glutinous or mixed with mucus. There is frequently present a dry, husky cough (hence the term ‘husk’). Diarrhoea and emaciation follow the long continuance of gastric catarrh.

Treatment.—I advise giving an emetic, either 1 grain of tartarized antimony, half to a teaspoonful of ipecacuanha wine, or a little warm salt and mustard-water, followed by a mild aperient and diet of iced skim milk and demulcents. Vegetable tonics and cod-liver-oil are subsequently serviceable in giving tone to the stomach. If worms are suspected, their immediate expulsion is essential, their presence in the stomach leading to other and graver symptoms. (See Fits.)

Gastritis.

Inflammation of the mucous membrane lining the stomach may supervene on prolonged gastric catarrh, but is more usually produced by mechanical injuries,

as sharp spiculi of bone, or other substances, also from irritant poisons and external violence.

Symptoms.—Gastritis is accompanied by frequent vomiting, which is prominent throughout the disease ; in fact, the sufferer is unable, except under special circumstances and diet, to retain food. The bowels are in a variable condition, alternately constipated or relaxed, and pressure or digital manipulation over the region of the stomach causes acute pain.

There is great febrile disturbance, indicated by increased temperature, a small rapid pulse, accelerated breathing, dry hot nose, furred tongue, injected mucous membranes, and intense thirst. The sufferer usually lies stretched out on its side, or full length on the belly in a cold place, giving vent to weak, pitiful mews. As the malady proceeds the extremities become cold, frequent shiverings occur, the eyes are sunken, and the pulse is almost imperceptible. The sudden disappearance of pain, coldness of the ears, body, and stationary condition of the skin when gathered up, with slight twitching of the limbs and intermittent breathing, denote gangrene has set in, and the poor creature dies gradually and quietly or in delirium.

Treatment.—Hot linseed poultices or flannel wrung out of hot mustard-water should without delay be applied over the stomach, and frequently repeated. Cold water or iced milk may be freely allowed ; nothing is more grateful to the burning stomach. Nourishment should be administered in small quantities in the form of mucilage, as milk and isinglass, or arrowroot, which, while protecting the irritable and inflamed mucous membrane, at the

same time sustains the patient.* Medicinally, opium, 1 to 3 grains in a little barley - water or thin gum mucilage, is the best sedative to the sensitive stomach. Constipation should be relieved with thin gruel enemas. When great prostration exists, nutrient enemas should be given in sufficiently small quantities to insure their retention, and repeated if rejected, or the anus closed with the finger for a time. It is imperative to place the patient on a very soft bed, and the return to solid food should be most gradual and approached with the greatest care.

* 'In prescribing a diet in oversensitive conditions of the stomach, it must be recollected that the food which comes into contact with the interior of the organ is to be regarded much in the same light as a local application made to tender parts of the body ; and as we should avoid bringing in contact with the latter any but bland and unirritating dressings, so with the former a similar principle must guide us, and we must select such matters only, and in such quantities as, while they are fitted to sustain the body, would be unirritating if applied to an external sore, and which experience has shown may be used, introduced into the sensitive stomach, without producing pain or distress.

'In inflammatory and ulcerative conditions of the stomach, where the tenderness of the stomach is more due to the extent and severity of these lesions than to the exalted impressibility of the nervous system, the diet must often be exceedingly rigid, being limited to some of the *most bland and soft or liquid articles of food*, such as milk, arrowroot, gruel or beef-tea, which can sometimes only be tolerated when given in the smallest quantities at a time, such as a tablespoonful or a teaspoonful. In cases in which acidity prevails, one-third part of lime-water is advantageously added. When these small quantities are given, they must be repeated every ten or twenty minutes, with occasional longer intervals, and if insufficient to support the patient, injections of good beef-tea, in addition, be thrown into the rectum.'—BALLARD *on Pain after Food*.

Gastro-enteritis.

The gastro-intestinal mucous membrane, in young cats especially, is more frequently the seat of disease than is usually suspected, hence the frequent reply to post-mortem queries: 'Death resulted from gastro-enteritis.'

Food of an improper nature, a vitiated atmosphere, and various foreign and septic irritants, may severally or combined produce gastro-enteric inflammation. In kittenhood kitten diet should be the rule, instead of, as it too often is, the exception. It is a great error to tax the undeveloped digestive organs by giving food impossible of digestion, which becomes in great part decomposed, acts as an irritant, and results in offensive diarrhœa. In short, cats and all other domesticated animals should be fed as nearly as possible in harmony with the laws of Nature.

A special form of inflammation of the stomach and bowels combined frequently attacks cats, and has lately been somewhat prevalent, assuming the appearance of an epidemic and being undoubtedly infectious. This type of gastro-enteritis is usually due to septic influences arising from unsanitary surroundings or impure food and water, and especially from contaminated milk.

Symptoms.—These in many respects simulate typhoid. The disease is accompanied with great prostration, offensive diarrhœa, often of a dirty green colour, or resembling pea soup. There is increased pulse, injection of the visible mucous membranes, furred tongue—especially dark at the edges—high temperature, abdominal enlargement and tenderness,

disinclination to move, and in advanced cases the animal lies stretched out on the side. In some cases there is frequent vomiting and intense thirst. Before death the animal may become comatose or delirious. A post-mortem examination usually reveals gangrenous ulceration of the stomach and bowels, with frequently lung complications; in others, diffused patches of gastric and intestinal inflammation, with extravasated blood spots.

Treatment. — Astringents and opiates are useful, especially opiate enemas, which subdue the intestinal irritation and check the diarrhœa.

Phenacetin in 2-grain doses for an adult cat, repeated every three or four hours, is extremely efficacious in lowering the temperature and pulse and relieving respiratory difficulty. The effect of a dose of this drug lasts from three to four hours, and is valuable in all acute febrile disorders.

Half to a grain of naphthol in half a teaspoonful of salad-oil is an excellent antiseptic in enteric disease, lessening the smell and irritant character of the fæces, and thus checking diarrhœa. On no account in cases of gastro-enteritis should purgatives be given. Hot fomentations or poultices to the abdomen are soothing and useful.

In persistent diarrhœa small doses of sulphate of copper and opium are useful, $\frac{1}{2}$ grain of the former and 1 grain of the latter. Starch enemas may also be employed.

The patient should be nourished with fluid mucilaginous food. A little iced milk occasionally is very grateful.

Strict cleanliness and disinfection should be

rigidly observed; evacuations, before removal, should be promptly covered with some active antiseptic and deodorant. Petanelle Powder is very immediate in its action on cat discharges, and can therefore be commended. Failing this, chloride of lime or chinosol.

When the acute symptoms have subsided, and during the approach of convalescence, small quantities of Easton's Syrup and cod-liver-oil may be given, and the yolk of egg with cream beaten up, and by degrees a little shredded or scrapped raw meat can be introduced; but the greatest caution should be exercised in giving solid food, as the gastric and intestinal mucous membrane remains in an extremely sensitive condition for a considerable period after an attack of this disease.

For gastro-enteric inflammation associated with worms, see Gastritis and Enteritis.

Foreign Bodies.

Amongst the foreign bodies found in the stomach of the cat, there occasionally exist accumulations of fur which have from time to time been swallowed in the process of licking the coat. In one instance a post-mortem examination revealed a nearly round solid pellet of fur coated with mucus, which had assumed dimensions too large to vomit or to be passed into the intestines. The creature had been gradually wasting for some time, and been noticed to have frequent attacks of retching, especially before feeding. Occasionally I have discovered fixed fish-bones, and once a needle and thread.

Gastrotomy, *i.e.*, opening the stomach, is the only means of removing a substance too large to be vomited or passed into the bowels. The operation, however, is attended with considerable danger, and may only be risked by an expert abdominal surgeon.



SIAMESE 'TIAM-O-SHIAN' IV.

THE PROPERTY OF MRS. VYVYAN.

(From a photograph by E. Landor, Ealing.)

CHAPTER IV

DISEASES OF THE BOWELS

CONSTIPATION—DIARRHŒA—DYSENTERY—COLIC—
ENTERITIS—PILES—WORMS.

Constipation.

THIS arises from a torpid condition of the bowels, inducing a collection and retention of hard fæculent matter, which is evacuated with difficulty and pain. Constipation is an associate of many diseases, and is a common attendant on paralysis and piles. If long maintained, protrusion of the anus takes place, the breath becomes offensive, and retching and vomiting occur.

Treatment.—Warm soapy water enemas and the administration of salad-oil, which I always prefer as a mechanical laxative; 1 to 2 dessertspoonfuls may be given to a full-grown cat. If the impaction is unusually hard, it should be broken down with the little finger (previously oiled), or otherwise, if the passage is too small, with a probe, and subsequently an injection of salad-oil should be given, or a little glycerine, but I only advise the latter in obstinate cases. For a few days it is advisable to feed the animal on sloppy diet, and teaspoonful doses of salad-

oil daily assist materially in maintaining a softened condition of the fæces.

Diarrhœa.

This is a complaint to which all cats are more or less subject, both young and old. It means the frequent evacuation of liquid fæces, and is an effort of Nature to get rid of some intestinal irritant, which may be putrid or undigested food, acrid bile, worms, poison, sharp portions of bone, grit, or other mechanical disturbants, not forgetting impure surroundings. Unweaned kittens may be affected through the mother's milk, and subsequently through the household milk being too rich and stimulating, and creating acidity.

Treatment.—At the onset a small dose of castor-oil or double the quantity of salad-oil should be given to remove the irritant. It is a great mistake to rush to astringents at first, and thus check the efforts of Nature to rid the bowels of the irritating cause of the attack. After the oil, if the diarrhœa still continues, the following mixture may be used :

Ess. menth. pip.	...	...	6 minims.
Extract. opii	...	...	6 grains.
Prepared chalk	...	...	1 drachm.
Tinct. catechu	...	...	2 drachms.
Infusum maticæ	...	...	4 ounces.

Half to a teaspoonful to be given after every evacuation.

Chlorodyne, 10 minims, in a teaspoonful or two of brandy and water is also efficacious. The diet should consist of mutton broth thickened with isinglass, or rice and barley milk slightly tepid. If

worms are present their speedy expulsion is indicated. In kittens, when diarrhœa is caused by acidity of milk, 5 grains of bicarbonate of soda in a teaspoonful of tepid water is the simplest and safest treatment, and if suckling double the dose with 15 grains of rhubarb may be given to the mother.

Dysentery.

This generally follows neglected and protracted diarrhœa, and is much more serious than the latter by reason of the inflamed condition of the intestinal mucous membrane. The presence of vitiated bile, putrid food, and worms are exciting causes of dysentery, and especially septic influences, when it frequently assumes a contagious form.

Symptoms.—Frequent offensive muco-sanguineous evacuations, sometimes mixed with small hard portions of excrement. The animal strains violently and exhibits considerable prostration. When ulceration is established, long shreds of lymph and purulent matter are discharged. There is great feverishness, accompanied by considerable thirst and loss of appetite.

Treatment.—Demulcent and mucilaginous drinks should be frequently administered, as milk thickened with isinglass or arrowroot. Medicinally small doses of sulphate of copper and opium, $\frac{1}{2}$ to 1 grain of the former and 1 to 3 grains of the latter, or chlorodyne, 10 to 15 minims, in barley-water. Hot bran or linseed poultices to the abdomen afford relief.

The patient should be kept perfectly quiet and moderately warm, and cleanliness of the external parts and bedding be strictly observed, together with

thorough antiseptic measures; the latter is especially necessary in septic cases, in which the creature should also be isolated.

In persistent cases of dysentery, starch and opiate enemata should be employed.

Colic.

Colic may arise from indigestion, intestinal obstruction, flatulency caused by fermentation of food, or worms and other foreign substances. A special form of colic is caused by lead-poisoning. Young kittens are occasionally affected through acidity of milk.

Symptoms.—These appear suddenly; the back is arched, and the belly drawn up or blown out with gas, and frequently painful mewings are given vent to. The animal is restless and constantly on the move, or if lying down continually changing its position.

Treatment.—If the attack occurs in an adult cat, give a teaspoonful of castor-oil in a dessertspoonful of warm milk. An enema is also useful, and abdominal hand-rubbing affords relief. In acute pain 5 to 10 minims of chlorodyne in a dessertspoonful of weak brandy and water may be given. Where there is much flatulency, 10 minims of sal volatile in a dessertspoonful of water will neutralize the gas, or 3 minims of essence of peppermint and 10 grains of bicarbonate of soda in the same quantity of water.

When colic occurs in unweaned kittens (a very rare occurrence), they should be removed if possible to a foster-mother, or the parent be treated with bicarbonate of soda, and have milk and lime-water to lap. For lead colic, see Poisons.

Enteritis.

Inflammation of the bowels is both a dangerous and agonizing disease, and usually involves the entire structure of the gut, *i.e.*, the mucous membrane lining it, the muscular coat, and the outside or peritoneal covering; but the mucous membrane in all instances is the chief seat of inflammation, and the other structures are more or less involved according to the severity and advancement of the disease.

Enteritis may follow protracted colic, abdominal contact with wet and cold, foreign bodies in the intestines (especially worms), stoppage, strangulation, and irritant poisons.

Symptoms.—A careful diagnosis is of the greatest importance. It is highly dangerous to treat a cat for colic when enteritis is present; the measures for the former would intensify the condition of the latter, and produce fatal termination. The pain in colic is intermittent, and pressure or friction to the abdomen affords relief, as also do stimulants and carminatives, whereas in enteritis the pain is continuous and extremely severe, and abdominal pressure cannot be borne.

In colic there is no injection of the visible mucous membranes, no increase in temperature, and only slight acceleration of the pulse and breathing during the spasm.

In enteritis the visible mucous membranes are highly injected, the thermometer *per rectum* shows considerable increase of temperature, and the pulse is increased in frequency and small.

In addition to the foregoing distinctive symptoms, there is great restlessness, thirst, obstinate constipation (or the reverse with mucoid and bloody evacuations), and offensive vomit. As the inflammatory action proceeds, the abdomen becomes very hot and extremely sensitive; the breath is hurried and purely thoracic—*i.e.*, no abdominal movement in respiration takes place. The sufferer assumes a sitting posture, lies flat on its side, or rolls over on its back, endeavouring in every way to avoid abdominal pressure.

Finally, abdominal distension takes place, and the sunken eyes, running-down pulse, low temperature, icy-cold mouth, cold extremities, short, difficult respiration, cadaverous odour, herald the approach of death, which may be preceded by convulsions or delirium.

Treatment.—First of all place the patient on an ample soft bed, then apply hot fomentations, linseed poultices, or flannel wrung out of hot mustard-water (I prefer the latter, as not exercising so much pressure), to the abdomen, and repeat if necessary. To alleviate the pain 1 to 2 grains of opium may be administered in a teaspoonful of barley-water or thin gum mucilage. Opiate enemas can be given for the same purpose. If constipation is present, a dessert-spoonful of salad-oil should be given, and a little warm oil may be injected into the rectum; but on no account should soapy water or glycerine be used, or, indeed, anything that is calculated to irritate the inflamed bowels, and this applies also to drastic purgatives, the administration of which is most dangerous.

When the acute symptoms have subsided, the counter-irritation may be discontinued; but the abdomen must be kept thoroughly warm and the patient quiet. Bland mucilaginous drinks should form the only support during the illness, and great care must be exercised in the diet when the patient is convalescent. A little well-boiled fish should be the first solid meal, and as strength increases finely-shredded raw meat in small quantities.

Piles.

Cats are seldom troubled with piles. Some cases, however, have come under my notice in aged, over-fed, and plethoric animals which have been allowed to lead a life of indolence and been surfeited with good living.

Symptoms.—The anus is swollen and relaxed, with protrusion and injection of the rectal mucous membrane. If the piles are external, a collection of small tortuous or varicose veins may be observed. The animal manifests considerable irritation of the part. If internal, the tumefaction is frequently protruded in the act of defecation, which is accompanied by considerable straining. Frequently there is a foetid discharge, and the stools are often mixed with blood. Abscess or fistula may follow neglect.

Treatment.—The bowels should be regulated, constipation especially avoided, and a plain, sparing diet allowed. Locally, ice, tannic acid, and belladonna ointment, or a decoction of oak bark, may be applied. An injection of a solution of permanganate of potash or chinosol when foetor is present is advisable, and constipation should be relieved by gruel enemata.

Worms.

Cats are subject to tape-worm (*Tænia solium*) and round-worm (*Ascaris marginata*), more frequently the latter (see Diseases of the Stomach). The presence of worms creates an unthrifty appearance; the fur is harsh, dry, and lustreless, and frequently the animal has a pot-bellied look, which is more pronounced when emaciated. The appetite is variable, generally, if tape-worm exists, rapacious. In the latter small segments may often be seen on the fur near the anus or on the underneath part of the tail.

Treatment.— $\frac{1}{2}$ to 1 grain of santonine and 3 or 4 minims of oil of male fern in a teaspoonful of salad-oil given fasting is a most efficacious vermifuge for round-worms, and 20 to 30 grains of freshly ground areca-nut for tape-worm.

The statement made in an advertising brochure, that cod-liver-oil is an excellent antidote for worms in the cat, is absurdly erroneous. It is without doubt a highly nutritive and recuperative agent to the host after the expulsion of worms, but if given for the latter purpose it has precisely the opposite effect, and sustains their vitality and encourages their presence.



RUSSIAN AND PERSIAN.

THE PROPERTY OF MRS. WELLBYE.

(From a photograph by E. Landor, Ealing.)

CHAPTER V

DISEASES OF THE SKIN

MANGE (SARCOPTIC AND FOLLICULAR)—RING-WORM—
ECZEMA—HERPES—VERMIN.

Mange.

Two forms of this disease attack the cat, viz., *sarcoptic* and *follicular*, both being produced by an acarus which multiplies speedily under filth and neglect. The disease in either form is characterized by intense itching, small red points which ultimately break and discharge a purulent serous fluid forming scales, which when removed by scratching or exfoliation leave bare patches. A peculiar mousy odour is invariably present.

In follicular mange the acarus, unlike the former, which is on the surface of the skin, buries itself in the sebaceous and hair follicles, and owing to this position the disease is not so contagious or rapid in development as sarcoptic mange, though more difficult to treat and of longer duration.

A dressing composed of

Sulphur sub.	...	...	...	I ounce,
Zinc. oxid.	...	...	...	$\frac{1}{2}$ ounce,
Balsam of Peru	...	...	...	$\frac{1}{4}$ ounce,
Paraffin	...	...	...	I drachm,

mixed into a thin paste with sweet oil, and applied daily to the affected parts, will usually be found efficacious in ordinary mange. On no account should the subject be washed until a week after the final dressing, the latter dependent on the cessation of all irritation, loose branlike scales, soundness of skin surface underneath, with appearance of new growth of fine fur on the bare patches, and absence of mousy odour.

In follicular mange I advise first dressing with 1 part of naphthol to 20 of sweet oil, to be gently rubbed into the affected parts for three consecutive days and subsequently with the following :

White precipitate	...	...	1 drachm.
Turpentine	...	...	1 drachm.
Sulphur ...	...	...	1 ounce.
Oil or vaseline	...	...	1 ounce.

To be applied daily.

The animal should wear a coat or covering whilst under this dressing, on account of the mercurial ingredient, and every care must be taken to guard against licking.

The diet of mangy cats should be nutritious but not stimulating, and medicinally a pinch of sulphur may be given in the milk, and if there is much debility a teaspoonful of cod-liver-oil and 30 drops of Parish's Chemical Food daily.

Ring-worm.

The form of this disease which affects the cat is that known as *tinea favosa*, or honeycomb ringworm, and is produced by a minute vegetable parasite or fungus. The invasion may appear in any part of the



"OMAR," FAMOUS IMPORTED PERSIAN CHINCHILLA.

Property of

Miss A. L. Pollard, Elizabeth, N. J.

body, but most usually in cats it is first found at the base of the claws and the fore-feet, from mice infection. From here it is generally transferred to the ears, head and face in the process of the animal cleaning itself. The intense irritation witnessed in the dog suffering from ring-worm is not so pronounced in the cat, but a peculiar mousy or urinal odour is invariably present. At the onset small yellow specks are observed at the seat of disease, which soon become elevated, with depressed centres, from which hairs protrude, and are easily withdrawn, not being dry, brittle, and easily broken, as in ordinary ring-worm.

The disease is communicable from the cat to human beings, many examples of which have come under my notice, notably one in which every member of the family had facial attacks through caressing a cat with infected feet. Dogs, rats, and tame mice have also communicated ring-worm to the human subject.

In the *Lyon Médical* (No. 21) M. Horand gives an account of two cases of transmission of *tinea favosa* from the lower animals to mankind. A girl, fifteen years old, had a cutaneous eruption on the outer side and back of the left hand, as well as towards the clavicle on the same side. An examination of the scurf and crusts from the centre of the patches revealed the presence of the *Achorion*, proving that the eruption was *tinea favosa*. In investigating its cause, it was gathered that one of the mistresses of this young girl was also affected with a similar eruption, and a microscopic inspection of the matters obtained from it established the fact. It was then ascertained that a cat in the house, which was often

caressed by the two patients, had been attacked some time previously by a crusty outbreak on its left ear and right fore-paw. There was still a little crust on the latter, and when a portion of it was submitted to microscopical scrutiny fragments of the *Achorion* were readily found. Horland clearly established the transmission of the disease from the cat to the people, but how did the animal obtain it? From a rat, replies Horland; and this source is very probable, if not absolutely certain, as he then gives an interesting history of a woman who contracted favus through introducing her hand into a rat-trap in which there had been a rat that had favus crusts on its head (*Ann. de Méd. Vét. de Brux.*).

Treatment.—I advise first washing the affected parts with a solution of hyposulphite of soda, 30 grains to the ounce of water, and then painting daily with iodine liniment. I have found nitrate of mercury ointment (1 in 4) the most efficacious, but under this treatment it is necessary to guard against the patient licking the parts, and if the feet are affected they should be enclosed in washleather or rubber socks.

Cats infected with ring-worm should be completely isolated, and disinfection thoroughly carried out. Straw or pine shavings form the most suitable bedding, which should be burnt each day and replenished with fresh. It is perhaps needless to say after dressing or handling such a patient careful ablution should follow, and the water may be asepticated with permanganate of potash, chinol, or formalin.

Eczema.

This is a non-contagious vesicular skin disease, which gives rise to considerable irritation and disfigurement. Though often confined to the thin and bare portions of the skin, as between the thighs, on the abdomen, and in the armpits, it very frequently attacks the cat on the head, above and around the eyes, also on the back, and especially towards the root of the tail.

Symptoms.—At first the skin is flushed and hot, and then patches of minute vesicles appear, which become ruptured through the animal constantly scratching or rubbing the parts. The exuded matter dries, and forms thin scabs or crusts, which if forcibly removed give rise to bleeding, extended sores, ulceration, and aggravation of the complaint.

Eczema may be inherited, and is most frequently seen in inbred cats and those in a plethoric and overfed condition. One attack favours a recurrence.

Treatment.—On no account should an eczematous cut be washed or fomented. The simplest and most efficacious dressing is an ointment composed of equal parts of oxide of zinc and sulphur and 2 parts of vaseline or sweet oil, applied to the affected parts daily. Wet sores may be occasionally dusted with dry oxide of zinc. Medicinally, a little magnesia or carbonate of potash in milk or on butter is beneficial. The diet should be plain and unstimulating. Salt fish especially must be prohibited.

Herpes (Labialis).

Herpes is a non-contagious vesicular skin eruption accompanied by irritation, redness, heat, and

swelling. When affecting the lips (*herpes labialis*), they become much swollen, and after vesicular rupture wet sores occur from lymph exudation, and ultimately scale if not interfered with. According to Erasmus Wilson, the eruption in *herpes labialis* is preceded by painful tension of the lip, sometimes affecting the mucous membrane of the *prolabium* only, at other times the integument alone, and, again, both the one and the other conjointly.

I am indebted to my son, Mr. Percy Woodroffe Hill, M.R.C.V.S., for notes of some cases which appear to me to bear a close resemblance to, if not actually, *herpes labialis*. He writes: 'I have also had two or three cats with bleeding sores, quite healthy in appearance, on the lips and eyelids, with a lot of thickening of the epidermis, but not a growth. All the whiskers on the affected side of the cat's mouth had disappeared. No ointments seemed to do any good, so I cauterized them well, daily at first, and then on alternate days, with silver nitrate, and they healed up in about a fortnight, and have not returned. It was not eczema, I am sure, as the rest of the body was perfectly clean, and these places when the animals were brought to me had been in existence some weeks—first a swelling of the lip, then the skin broke, and always after that a gradually increasing bleeding sore followed, quite red and raw-looking.'

Vermin.

Fleas and lice are unpleasant feline guests, their presence being encouraged by neglect and filth. The former may be got rid of with turpentine, aniseed,

Persian insect powder, stavesacre decoction, tobacco-water, paraffin, benzoline, or spirits of camphor. I prefer one of the three latter applied with a spray. It is necessary that not only all the fleas should be removed, but also their larvæ.

Lice, though not attended by so much irritability as the former, are nevertheless troublesome, and perhaps more annoying from the fact that they are usually an indication of uncleanness. They are hatched from eggs or nits attached to the fur. A dressing of stavesacre, 1 part to 30 of vinegar, is sometimes effectual; but white precipitate powder carefully brushed into the fur, and removed in five or six hours, is by far the most effectual application for the destruction of lice. It is necessary, however, to guard against the animal licking itself whilst thus treated.

CHAPTER VI

DISEASES OF THE EAR

CANKER—SEROUS ABSCESS.

Canker.

THIS unpleasant affection is not uncommon in the ear of the cat, and may arise from three distinct causes, viz.: (1) Congestion of the bloodvessels produced by water or other foreign matters lodging in the ear; (2) associated with eczema; (3) due to the presence of minute acari.

Symptoms.—The visible lining membrane of the ear-passage has an inflamed appearance, whilst the root of the ear itself is hot and tender. There is a constant inclination to rub the organ on the ground and scratch it. If one ear only is affected, or worse than its fellow, the head is held down on that side. An offensive, darkish-brown discharge issues from the passage. Occasionally the glands of the throat are swollen, generally so in severe cases.

Treatment.—After syringing the ear with warm water, asepticized with permanganate of potash or chinosol, pour into it a few drops of sweet oil, then a pinch of oxide of zinc, and gently work together by manipulating the ear externally with the thumb

and finger. If this treatment is pursued daily, recovery (where ulceration has not taken place) is usually established in a week to ten days. When ulcerated slightly, touch with nitrate of silver or 20 per cent. solution of sulphate of copper. In parasitic canker, either the nitrate of mercury ointment (1 in 4) or the ordinary white precipitate will effect a cure. A saline aperient is advisable if much febrile disturbance is present.

Serous Abscess.

Cats are frequently the subject of serous abscess in the ear—in other words, an accumulation of serum between the integument on the inside of the ear and the cartilage underneath. This collection of fluid causes the organ to fall, and gives it a baggy, dropsical appearance. On handling it, the ear will be found hot, extremely sensitive to pressure, and the nature of the swelling is readily detected. Such a condition usually arises from a blow.

Treatment.—The sac should be opened at its most dependent part with a lance, or sharp scalpel, or pen-knife, making a free incision lengthwise—*i.e.*, towards the point of the ear (never across)—and evacuating the contents. When empty, gently press the ear flat between the thumb and forefinger for a minute or so to exclude air from the sac; then place a piece of lint or pad of cotton-wool over the wound, and bind the ear inverted to the head for a few hours. In cats this bandage is not so easily retained as with dogs; therefore the patient should be kept under surveillance. Usually the wound quickly heals and the ear assumes its normal carriage. Should secondary

effusion occur and be neglected, lymph is thrown out, and, becoming organized, gives rise to a thick, lumpy, contracted, puckered condition of the ear. In this case it should again be incised, all adhesions separated and removed, the contractions dispersed by massage and gradual stretching (taking care the root of the ear is held firmly during the procedure). The space between the integument and cartilage should then be packed with cotton-wool steeped in tincture of iodine, and renewed every second day until all thickening and lumpiness have disappeared, and the ear assumed its natural character.

CHAPTER VII

DISEASES OF THE EYE

OPHTHALMIA—PROTRUSION OF EYEBALL—
HYDROPHTHALMIA.

Ophthalmia.

INFLAMMATION of the mucous membrane of the eyeball and lids may be of a catarrhal form, or occur as the result of external violence, the presence of irritating foreign matters, exposure to damp and cold, or be sympathetic with other diseases, notably distemper.

Symptoms.—Intolerance of light, cold, draught, or touch; repeated closing of eyelids, considerable lachrymation, redness of the conjunctival membrane with swollen eyelids; the cornea is traversed with engorged bloodvessels, followed by ulceration and loss of sight if the case is neglected.

Treatment.—The lids should be opened, and a careful examination made for the presence of foreign matters, which if discovered must be gently removed, and a spot of sweet oil may be applied with a feather or camel-hair brush, or simply dropped in the eye. Afterwards warm sedative fomentations with a soft sponge are useful and soothing. Exposure to light

or cold, and especially the near approach to a fire, must be avoided. When the eye becomes opaque (milky), I advise the application of dry oxide of zinc, after first bathing with warm milk and water. Ulceration of the cornea in the cat will equally yield to oxide of zinc, which in canine and feline practice is practically a specific in these cases. Where there is considerable pain and distress, a drop of 5 per cent. solution of cocaine affords great relief. It is not unusual for cats after shows, when there has been too pungent disinfection, to have ophthalmic attacks. Conjunctivitis often occurs in young kittens from exposure to cold, and the eyelids become glued together with discharge; they should be gently separated with a warm, wet sponge, and a little oil applied to the edges of the lids.

Protrusion of the Eyeball.

This usually occurs from external violence, often from dog-worrying, many cases of which have come under my notice. If the displacement is unduly prolonged, blindness results from stretching and paralysis of the optic nerve. The return of the organ is not difficult if the accident is recent when taken in hand. The patient should be enclosed (all but the head) in a shawl or sacking, and, being firmly held by an assistant (generally a second one is required to hold the head), the operator should first apply with a soft sponge some warm milk and water to the protruded optic, and especially should any grit, dirt, hairs, or foreign matter be removed. Then, after applying a drop or two of olive-oil, allowing it to suffuse the entire protrusion, the upper lid, and

sometimes the lower, is to be grasped at the centre of its margin with forceps, and drawn firmly forward, at the same time bringing gentle pressure to bear on the eyeball with the thumb or finger until it returns within the socket. The inverted condition of the lids in some cases creates a little difficulty in obtaining a firm hold; in these cases claw forceps are the most useful. To prevent recurrent protrusion, a pad of wet lint should be immediately applied, with a head bandage. Occasionally it is necessary, especially after prolonged displacement, to close the lids with sutures, first placing a portion of wet lint over the eyeball. The sutures should remain for forty-eight hours, and when removed warm milk and water fomentations be applied. Any subsequent opacity of the cornea may generally be dispersed with the occasional application of a little dry oxide of zinc.

Should the eyeball be completely torn from its attachments, immediate excision of the organ is indicated, after which a pledget of cotton-wool, steeped in iron or other astringent, should be packed in the optic cavity, the lids closed with sutures, and a cold wet compress and bandage applied. The sutures and packing may be removed on the second day, and the cavity afterwards treated antiseptically. A dark room is advisable until the inflammatory action has abated.

Needless to say the above operations are essentially a veterinarian's or surgeon's.

Hydrophthalmia.

Hydrophthalmia, meaning dropsy of the eye, arising from an abnormal accumulation of fluid in

the anterior or posterior chamber of the eye, or both combined, is a condition I have several times met with in ophthalmic practice, and an affection to which I was the first to draw veterinary attention in 1884. One or both eyes may be affected; but, unless congenital, it is usually confined to one, and generally as the result of injury, especially concussion from a violent blow.

Symptoms.—Abnormal protrusion and enlargement of the eyeball (as though it were about to burst), which is usually tense, hard, and cloudy. The pupil is motionless, and the eye has a peculiar fixed stare. Total blindness is a common sequel where treatment is not adopted.

Treatment.—This consists in tapping through the sclerotica immediately behind the outer margin of the cornea with a fine lancet-pointed surgical needle, followed by pad pressure. In this operation I have sometimes evacuated more than a drachm of amber-coloured fluid. Secondary tapping in the course of a few days is generally required. Subsequently a drop of weak solution of iodine may be placed daily on the eyeball, or a little oxide of zinc, both being useful in removing opacity.

In persistent cases painting round the orbit and underneath the eye with iodine, the administration of iodide of potassium, and the application of atropine, are sometimes beneficial.

As in the preceding subjects, the case is one for a professional man to deal with.

CHAPTER VIII

FUNCTIONS OF THE GENERATIVE ORGANS

ŒSTRUM AND BREEDING—PARTURITION—ABORTION.

THE female cat is usually in œstrum from three to four times during the year, though this depends upon age and other circumstances. The average period of pregnancy is eight weeks. After parturition the lochial discharge has been frequently observed in this animal for several days. The detection of pregnancy after the middle period is not difficult by careful manipulation when the animal is placed upon its back; then ovoid substances on either side, according to the number of foetuses, can be felt. My advice is to leave a cat absolutely alone during its travail; its own instincts will suffice to do, under favourable circumstances, all that is necessary. It is only when after protracted suffering in prolonged labour, and evident inability to give birth to its young, that assistance should be rendered, and in such cases I have been instrumental in saving the life of a valuable mother and offspring; but never will I undertake delivery, especially with instruments, until I am fully satisfied the approaching parent is

unable by her own exertions to parturiate.* Then, beyond a little stimulant (brandy and milk), the mother and family should be left quietly and comfortably alone, with a saucer of milk within reach. The cat is a wonderful mother, and generally capable of fulfilling all the attributes of one—add to which she is extremely patient and forbearing, as perhaps no household animal pet with newly-born progeny is so much interfered with, especially if children are about, when the kittens are constantly removed to be shown, nursed, or carried about. Nevertheless it is well to remember that a powerful instinctive desire is present in all animals, especially Carnivora, to protect their young and remain with them, and therefore the less they are disturbed or meddled with the better.

Abortion.

Cats very seldom abort, unless as the result of serious injuries, such as abdominal crushing or mauling. The period at which abortion may take place varies; it may follow within forty-eight hours after the injury, or not until within a week or ten days from the date of parturition. Little or no notice is taken of the prematurely expelled offspring, and in the cat, unless some severe uterine injury has

* In a case I was recently asked to attend by a medical man, when the patient had been in prolonged painful labour and was in a state of collapse and given up as hopeless, I found a cross-presentation. After a little patience, I was fortunately able to deliver the kitten (though dead) by a special instrument that has rendered me many friendly services in feline obstetrics. Three normal births subsequently took place, and both mother and offspring did well.

occurred, rarely any after-trouble follows. Still, it is advisable to syringe antiseptically and prohibit breeding until one or two periods of œstrum have passed. Should loss of appetite and emaciation follow, mineral tonics and cod-liver-oil may be given, and small portions of raw lean meat or raw-meat juice.

Under all circumstances of abortion it is advisable to completely isolate the subject from pregnant companions, and place it in suitable confinement until restored to normal condition. Suitably constructed, convenient, and easily portable boxes can be obtained from Messrs. Frazer and Co., Norwich, who manufacture most excellently arranged appliances of all descriptions for canine and feline habitation.

CHAPTER IX

DISEASES ASSOCIATED WITH PARTURITION

PUERPERAL FITS AND MANIA—MILK FEVER—
AGALACTIA—METRITIS.

Puerperal Fits and Mania.

OCCASIONALLY, as in the bitch, these occur soon after parturition, probably due to some abnormal condition of the nervous system arising from septic influence. The cases which have come under my notice have occurred in young cats after their first parturition.

Symptoms.—Unusual restlessness is manifested, associated with either entire suspension of milk or a very scanty secretion. The animal has a wild, unnatural expression, similar to that observed on recovering from an epileptic seizure. The least noise creates alarm, and handling the subject increases its excitement. The offspring are either ignored, mangled, or devoured. Suddenly the animal becomes rigid and falls over flat on its side. The fit quickly passes off if no interference takes place, but recurs if any alarm is occasioned. The pulse is rapid, the tongue purplish and furred, and the skin

unusually hot. The bowels may be torpid, but more frequently the opposite, with constant evacuations.

Treatment.—Removal of kittens. Administration of 5-grain doses of bromide of potassium, subcutaneous injection of morphia, and in severe cases 5 to 10 grains of chloral hydrate.

Diet.—When able to take it without excitement, brandy and milk and raw-meat juice. If constipated, enemas.

Milk Fever.

This disease is not common in cats, a fact probably arising from protracted labour and the hæmorrhage following each birth. The pathology of the disease is much the same as in other animals.

Causes.—Excessive plethora and obesity at the time of parturition, the sudden removal of offspring, cold or extreme heat.

Symptoms.—Staggering gait, contracted pupils, quick full pulse, hot nose, and extreme thirst, are the early symptoms, followed by entire suppression of milk, constipation, coma, tympany, delirium, and death.

Treatment.—Early bleeding, counter-irritation at the back of the head and along the spine, stimulants and aperients. The head should be kept in an elevated position, the milk repeatedly withdrawn, if possible by natural means, or otherwise by artificial aid; for this purpose I have used the ordinary human-breast exhauster. The bowels should be relieved by enemas. If the animal is comatose no attempt should be made to pour anything down its throat, or asphyxia will be the result.

Agalactia.

Agalactia—*i.e.*, loss of milk—is not unfrequently met with in cats, but is more general in aged ones and those which have not bred for some time. Several causes may operate in the non-secretion of milk, notably defective development of the mammary glands, acute or chronic disease of the same, general debility, sudden chills after parturition, especially if the animal is plethoric. In such a case the glands are abnormally soft and small, and upon drawing the teats a thin, yellowish, scanty fluid is emitted, followed sometimes by a little white watery matter. The nipples are usually pallid and contracted.

Treatment.—This should be directed to the nourishment of the creature, and the encouragement of milk by frequently drawing the nipples. A breast-exhauster is useful for this purpose, and where possible I have sometimes found a kitten a week or ten days old still better. In cases of debility or anæmia, cod-liver-oil and good rabbit or mutton broth should be given, also raw-meat juice and brandy. Of course, in defective glandular development or mammary disease it is useless labour to attempt to encourage the secretion of milk, and if the progeny are of sufficient value a foster-mother should be obtained.

Metritis.

Inflammation of the womb seldom occurs in the cat after normal parturition, but is usually associated with prolonged labour of great difficulty, and especially when the unborn young are dead and putrefaction has commenced. Uterine injuries from external violence and rough obstetricism may also give rise to metritis.

Symptoms.—Manipulation or pressure in the uterine region is attended with considerable pain; the abdomen is distended beyond the limit of pregnancy, and very hot and tense. The animal is reluctant to lie down, and frequently urinates. The vulva is tumefied, and a foetid purulent discharge sooner or later issues from the vagina. Necessarily there is considerable febrile disturbance, and the secretion of milk is entirely suspended. Ulceration or gangrene may terminate the case.

Treatment.—Presuming the young are removed from the parent, the uterus should be gently syringed with a tepid solution of permanganate of potash or chinosol. Local fomentations or linseed poultices to the abdomen, and hot hip-baths, are also serviceable. A grain of opium with a teaspoonful of brandy in a dessertspoonful of warm milk affords relief in prostration and pain. A warm infusion of poppy-heads may also be injected into the uterus, but it must be done gently, and great care exercised when inserting the vaginal tube through the mouth of the inflamed organ; in the absence of professional aid, it is better to be content with vaginal injections. The bowels should be gently moved with equal parts of castor and salad oil. A soft, comfortable, and antiseptic bed is most essential. A cushion stuffed with Petanelle Deodorant Wool is the best article to use (see Disinfection). Lying on hard, bare, or cold floors is extremely dangerous. Liquid, nourishing, and mucilaginous food should be given, and cold water or milk to lap. During convalescence, iodide of potassium, iron, cod-liver-oil, and quinine are serviceable. Breeding should be prohibited for a time after an attack of metritis.

CHAPTER X

DISEASES OF THE MAMMARY GLANDS

MAMMITIS—LACTEAL TUMOURS—CANCER.

Mammitis.

INFLAMMATION of the milk glands is not of so frequent occurrence in the cat as it is in the bitch. I have, however, had some very severe cases to deal with. It may precede, accompany, or follow lactation.

Causes.—External injury, especially blows, retention of milk, exposure to damp and cold, irritation of wounded nipple, etc.

Symptoms.—The affected gland is enlarged, red, hot, and extremely sensitive to the touch; the lacteal secretion becomes changed in character, being curdled, and subsequently mixed with blood or pus. Considerable febrile disturbance is present, especially if more than one gland be affected, and the poor animal has frequent shiverings, and usually lies stretched out on its side. Naturally there is an increase of temperature and pulse.

Treatment.—In the early stage, when there is considerable congestion of the mammary vessels, I have found leeches serviceable. The cat must be carefully held during their application, which creates some



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little alarm at first, but soon gives relief. Hot sedative fomentations should also be employed, and linseed poultices when suppuration has commenced. Extract of belladonna and vaseline rubbed frequently and gently on the gland relieves congestion, milk secretion and pain, but care must be taken that the animal does not lick it. When matter has formed and is approaching the surface, it should be evacuated with the lance, and the part subsequently treated as for abscess. The diet should be light, unstimulating, and nutritious, and the patient be supplied with a soft bed.

Chronic mammitis often follows the acute form, and is denoted by an enlarged, indurated, and knotty or lumpy condition of the gland. This form is attended with but little pain or constitutional disturbance, and usually, if not interfered with, becomes a permanent induration. It is, however, often aggravated after another parturition, and may assume a cancerous type, necessitating the entire removal of the gland.

Treatment.—Locally, the daily application of iodine ointment or liniment, friction, and, when large and weighty, suspension with a handkerchief or net fastened over the back, but in the latter case I prefer removal of the gland.

Medicinally, iodide of potassium daily in 5-grain doses is beneficial.

Lacteal Tumours.

These usually follow prolonged retention of milk, especially when the kittens, after being with the mother a few days, are removed; the milk, which

has been daily increasing in quantity, becomes inspissated, and gives rise to an enlarged, hot, fluctuating condition of the mammary gland, which subsequently becomes irregular and knotty. Notwithstanding opinions to the contrary, an overstrained mammary gland in a nursing animal produces great distress and pain. What is more painful to a nursing woman than protracted inexhaustion of the breast?

Animals have similar sensations without doubt, and therefore it is our duty, if we rob a cat of her progeny, to see that maternal suffering should not be increased by neglecting the simple humane office of withdrawing the milk provided for the lost family. This should be done by natural means when possible; otherwise a human-breast exhauster may be used and the glands gently rubbed with camphorated oil.

With lacteal tumours, if they are fluctuating, and no issue can be obtained through the nipple, they can be punctured, and if indurated and of long existence, excision may be had recourse to; but unless they have been injured by blows or other violence, and inflammatory action has arisen, I do not, in the cat, consider the latter operation necessary, and simply advise painting with iodine.

After the occurrence of lacteal tumours, especially when indurated, breeding should be prohibited; otherwise it either means procuring a foster-mother or destroying the offspring.

Cancer.

A few cases of typical scirrhus mammary cancer have come under my notice in aged breeding cats,

the affected gland presenting a knotty, irregular, bluish glazed surface, from which issued, when ruptured, a sanious foetid discharge; excavating ulceration and sinuses were also present, with various cysts. The nipple was deeply retracted.

In each case complete excision of the gland was adopted, the parts aseptically treated, and good recoveries followed without recurrent attacks.

I have known the disease to recur in bitches after a period of three years from the date of removal, and involve other glands and internal organs (in one case four recurrent attacks took place, extending over a period of five years from the onset); but in the cat no such instance has come before me, though probably isolated cases may have occurred.

CHAPTER XI

DISEASES OF THE NERVOUS SYSTEM

RABIES—EPILEPSY—APOPLEXY—NOSTOMANIA
—PARALYSIS.

Rabies.

FORTUNATELY, this great source of dread in the canine world is not, so far as my experience has gone, of common occurrence in the cat. During active professional work extending over thirty years, and embracing extensive feline practice, I cannot call to mind a single case of rabies in the cat. I therefore reproduce from Fleming's work on 'Rabies and Hydrophobia' the symptoms given by that authority :

'The cat, like the dog, is our lifelong companion, and lives on terms of the closest intimacy with us in our dwellings. It is also liable to contract rabies either spontaneously [? W. H.] or by inoculation, though, happily, it is rarely affected, for a rabid cat is even more terrible and dangerous than the dog. In fact, when the cat becomes mad, its tiger-like nature is thoroughly awakened, and its bites are more death-dealing than those of the dog.*

* 'In Algeria, Dr. David, of Lestrade, saw a dog dying of rabies transmit the disease to a cat by biting it. This cat, in

‘The furious symptoms are preceded by precursory signs which are not to be overlooked if we wish to guard against serious accidents, though they are not so easily and exactly observed as in the dog, because of the different habits and disposition of the animal. At the commencement it evinces alteration of the appetite, a gloomy dulness, objectless agitation and restlessness, which is all the more striking as this creature is in its nature somewhat inclined to sleep, and passes the greater part of its life in repose.

‘Frequently the appetite is depraved, and there is thirst, with a strong tendency to bite, which is somewhat unusual, as the cat in a domesticated condition is much more disposed to use its claws than its teeth. There is, then, reason to be suspicious when an animal of this species, contrary to its ordinary habits, becomes all at once restless, offers to attack people without being provoked, moves about evidently without cause, has a tendency to keep aloof, refuses to eat or drink for several days,

its turn, bit two persons, who succumbed a short time afterwards to hydrophobia. Cats are not unfrequently affected with rabies in that country. Roucher mentions four instances, three of which had been caused by bites. One died ; another was killed after attacking a man, who subsequently perished from hydrophobia ; the fate of the third was not known. The fourth instance was that of a cat at Orléansville, which communicated the disease, apparently without having been bitten itself. After an absence of several days it returned home, and wounded the woman who owned it ; the latter was soon affected with hydrophobia and died. The animal then disappeared, and in a few days after two dead cats were found in a street of the town in the colony where it had taken refuge. No case of hydrophobia was reported from this town.’—DUSSOURT.

or has a depraved taste and great thirst, and expresses by its attitudes and its physiognomy that there is something unusual affecting it. In such circumstances it is not too soon to take precautions, and to become master of the creature by a close and sure sequestration.

‘When the furious symptoms of rabies appear in the cat, its great eyes sparkle with an unnatural light and express a startling degree of ferocity. There is nothing more terrible than to see a mad cat in a cage, says Bouley; the mouth is partly open and foamy, the back arched, and the tail beating its flanks; its claws are so rigidly protruded as to cause it to walk with difficulty, and they penetrate the floor, leaving their imprint there. When anyone presents himself before it, it flies towards him at a single bound as high as the cage will permit, as if to attack the person’s face, for this always appears to be the part of the body for which the mad creature has a special predilection when it is at liberty.

‘The rabid cat no longer knows its owner. Tamed rather than thoroughly domesticated, it in this condition reassumes all its ferocious instincts, and freely abandons itself to them. In this, as in so many other respects, the cat differs widely from the dog. The latter is intensely devoted to its master, and finds in its affection for him a power sufficiently strong to dominate for a comparatively long time the fierce desires that rabies fatally develops in it; rather than obey them, it will fly from its home when it can, and vent its involuntary rage on anyone rather than those it loves. The cat will also

leave the domestic roof when rabid, though rather through the influence of its savage nature than its devotion to its human companions, and will retire to some obscure loft, cave, or out-of-the-way place to die. It often wanders far from home. The claws are at times more frequently brought into use than the teeth, though both are unsparingly employed when the animal is in one of its paroxysms. As with the dog, the cat soon becomes haggard-looking and emaciated; the voice becomes changed, and assumes a special character—hoarse, sinister, and so disagreeable that it is not unlike the sounds emitted in the midnight serenades of this creature, though the muscles concerned in swallowing are not so much involved as in the dog. Paralysis is not long in appearing, and death puts an end to this miserable condition in from two to four days.'

Fits, Epilepsy and Apoplexy.

These in the cat (apart from puerperal seizures) are usually epileptic, and very frequently the result of gastric irritation from the presence of worms. I have known instances of cats becoming suddenly crazed with excitement and jumping through a window, or madly racing up and down stairs, due to the cause named.

The statement made by another writer, that a she-cat never has a fit after having once littered, is erroneous. Kittening will no more remove the parasitic cause of fits than water will quench a paraffin flame.

If the great nervous excitability mentioned is not speedily abated, the creature suddenly becomes un-

conscious and convulsed, and upon recovering sensibility frequently repeats its frantic movements, or hides in some secluded spot, bloodshot-eyed and panting.

Treatment.—The same writer, who advises slitting the ears, and gives the result of a few drops of blood as sufficient, would be acting more in accordance with his advice to ‘be gentle and quiet with the poor animal’ if he ignored the ear-slitting and took measures for the expulsion of the irritating guest giving rise to the attack.

An emetic is first indicated, and subsequently a vermifuge (see Worms). This may be followed, if nervous excitability continues, with 3 to 6 grains of bromide of potassium in a teaspoonful of water, repeated every three or four hours, and a little warm milk given to lap.

Apoplexy,

except in exceedingly plethoric and obese cats, is most rare, and then only when the animal is unduly or violently excited or long constipated. The symptoms are, sudden insensibility, heavy snoring respiration, slow, intermittent pulse, fixed, staring, bloodshot eyes with widely dilated pupils. The teeth are tightly clenched, with frequently oozing of frothy saliva from the corners of the mouth and nostrils.

Treatment.—Bleeding affords the speediest relief; this can be done by clipping the fur off two or three places at the back of the head and applying leeches, first pricking the skin. Ammonia should be applied to the nostrils, and a little brandy or whisky rubbed

on the gums and down the spine. When sensibility returns, it is advisable to give a smart aperient and keep on low diet.

Nostomania.

Cats, like dogs, suffer from 'home sickness.' It has been observed that the former attach themselves more to the house than the individual; be that as it may, it is surprising how speedily they find their way back after removal to even many miles distant. I recollect as a boy six warehouse cats being taken at night in a sack by cart and turned out on a common five miles away, and, to the astonishment of the man, they were all at home again the following morning; and instances of returning from much greater distances have been recorded.

But although some cats remain contentedly in their new abode, and especially with kind friends, there are instances where they have become melancholic, refused food, pined, and wasted away.

It is not humane to place a tenderly nurtured cat of highly nervous sensibility with a number of strange animals in a new home, or especially a sick hospital, surrounded by other caged quadrupeds. However kind the next owner or attendant may be, the new and unpalatable surroundings and the familiar voices missed have much to do with the development of nostomania.

As with dogs, so there are cats *and* cats, and a pet one enjoys a peculiar distinction in the feline world, being usually under the protection and kind care of an affectionate and devoted mistress. A cage to a drawing-room cat is on a par with a cell to a human being under analogous conditions. In short, a

caressed pet cat invites caressing, and the hitherto usual home life of the animal, its disposition and peculiarities, should be studied by its new owner.

Paralysis.

This may arise from injury to the brain or spinal cord, or result from old age and general debility, and it may also occur from poisons, notably lead and mercury. Paralysis is also associated with epilepsy, distemper, prolonged constipation, and distension of the bladder.

Symptoms.—Loss of locomotive power, weakness, and muscular twitchings, are amongst the early indications of paralysis. In aged cats there is a gradual wasting of the muscles, with involuntary evacuation and micturition. In sudden attacks there is immediate loss of muscular power in the affected region. In spinal paralysis the hind-quarters are affected; the animal is unable to stand upright, and trails the hind-limbs after it when made to move. The tail is also powerless.

In paralysis arising from lead-poisoning, the limbs and joints are affected, the gums become blue, the breath is offensive, and severe colicky pains occur, with black evacuations.

In mercurial paralysis salivation takes place, mastication is performed with difficulty, the gums are sore, the teeth dark brownish-yellow or black, and emaciation quickly follows. Convulsive muscular movements are also noticeable.

Lumbar paralysis is the most common form seen in the cat, and generally the result of spinal injury, arising from severe external violence.

Treatment.—Restoration of nerve power is the object to be attained, and it is therefore necessary to select those agents which are of value in this direction. Strychnia, nux vomica, bromide of potassium, iron salts, cod-liver-oil, and quinine, are amongst those usually had recourse to. Strychnia and nux vomica require special care in prescribing and administering. The former has to be given in such delicately minute doses, and the cat is so susceptible to its action, that it is much safer to trust to the *liquor strychnia*, or, better still, *nux vomica*. The dose of the latter for an adult cat is $\frac{1}{2}$ to 1 grain, which may be combined with 5 grains of sulphate of iron, and given in pill form twice daily *an hour after feeding*. Easton's syrup, which contains strychnine, is a useful formula in such cases; dose, 20 minims in a dessertspoonful of water after morning and evening meal. In protracted cases the dose may be *gradually* increased to 60 minims, but it is most necessary the intervals of administration should be regular, and the preliminary meal never omitted. It is advisable also, in leaving the medicine off, to gradually, and not suddenly, suspend it. Locally, especially in lumbar paralysis, friction, counter-irritation, and galvanism may be employed with advantage, *but on no account should neat turpentine be used*. Good nourishing, easily digestible diet should be allowed. If constipation is present (frequently the case in spinal paralysis) enemas should be used. Under the above treatment, a patient paralyzed for eighteen weeks made a complete recovery—as I assured the owner it would do—though several times it was on the point of being destroyed.

One point necessary to be observed in paralysis, when the patient is completely helpless, is to frequently change the position to avoid sores arising, as they often do from lying in the involuntary escape of urine. In these cases Petanelle wool for bedding, or a cushion made therefrom, is of great value. (See Disinfection.)

In confirmed and chronic paralysis complete recovery is rarely witnessed, some lingering effect, as twitching or tremor of a part, being observable throughout the animal's life. In such cases exposure to cold and damp should be avoided.

Cases of lead paralysis should be treated with iodide of potassium in 5-grain doses, or dilute sulphuric acid, 5 minims in a little water, and sulphur baths.

Mercurial paralysis is also treated with iodide of potassium, white of eggs, cod-liver-oil, and sulphur baths.



SMOKE NEUTER 'CHILI.'

THE PROPERTY OF MISS KIRKPATRICK.

(From a photograph by E. Landor, Ealing.)

CHAPTER XII

GENERAL DISEASES

DISTEMPER — JAUNDICE — HEPATITIS — DROPSY —
RHEUMATISM — CRAMP — CYSTITIS — NEPHRITIS —
ANÆMIA — DIPHTHERIA — SALIVATION.

Distemper.

UNFORTUNATELY, this dire disease of our canine friends prevails with the feline race, and what has been accounted 'malignant influenza,' with its erroneously alleged communication to the human subject, has merely been the disease in question.

Symptoms. — These in the cat are practically analogous to those observed in the dog. There is a heavy, dull appearance of countenance, especially about the eyes. The animal has frequent shivering fits, with sneezing, coughing, retching, and vomiting. The nose is hot and dry, the eyes and nose have a watery discharge, which subsequently becomes purulent. The breathing is hurried and snuffly. A sickly, offensive odour, even more pronounced than in the dog, is emitted from the body. Beyond, however, lung complications, with sometimes jaundice and enteric disturbance, there seldom exists cerebral

associations. A cat with neglected distemper most frequently succumbs to pneumonia.

Treatment.—The patient should be kept warm and dry. All discharges from the eyes and nose should be frequently removed with a soft sponge wetted with a solution of chinosol or permanganate of potash. Nourishing food (beef-tea, milk, eggs, shredded raw meat), should be allowed, or, if necessary, administered. Medicinally, stimulants and tonics are advisable, as small doses of brandy and milk and Parish's Chemical Food; during convalescence cod-liver-oil and quinine. Fish is always a dainty and appetizing diet for cats. As a preventive of distemper, I am of opinion that inoculation on the system I adopt in canine practice is a safeguard.

Jaundice.

This disease, which is commonly known as the 'yellows,' may exist alone or be associated with distemper, but it occurs more frequently apart from the latter in cats. It has been stated to be more common in males than females, but either are liable to an attack. Jaundice is produced by an accumulation of bile in the blood, due to suppression of the biliary functions, or it may arise from the reabsorption of bile caused by derangement of the hepatic circulation, or, again, from obstruction to the passage of bile into the intestine. Pregnant cats sometimes, like bitches, have an attack of jaundice through uterine pressure, which generally disappears after birth is complete.

Symptoms.—The skin throughout is yellow, which is especially noticeable inside the thighs, armpits,

and ears, and in advanced cases is stationary when gathered up with the hand. The visible mucous membranes are similarly stained, the white of the eye, gums, and inner surface of the lips being particularly so. The tongue also is yellowish and furred, and the breath offensive. Yellow or greenish vomit usually occurs. The animal is listless, and has little or no appetite. Evacuations may be dry and of a pale clay colour, or relaxed, greenish-black, and highly offensive, usually the latter. The urine is generally of a dirty-brown hue. Sometimes enlargement in the hepatic region is present (notably if the liver is greatly congested), and pain is evinced on pressure. Convulsions and coma usually precede death.

Treatment.—To an adult cat give 1 grain of aloin, with 5 grains of rhubarb, and the following day half a teaspoonful of sulphate of magnesia, which may be repeated in six hours, and the following day, if no improvement, repeat again with 10 grains of taraxacum. Should there be hepatic enlargement, with tenderness, the application of linseed and mustard poultices is advisable. The diet should be restricted to milk with a third of lime-water, spooned frequently down if refused. When there is much weakness, I advise to be given twice daily 1 grain of quinine with 2 minims of nitro-hydrochloric acid in a dessert-spoonful of water; and if bilious diarrhoea is present mucilaginous food should be given, and medicinally 10 minims of chlorodyne or 1 grain of opium.

A cat with jaundice must not be exposed to damp or cold, neither should the temperature be too high.

Hepatitis.

Inflammation of the liver sometimes arises from an extreme condition of plethora, and overfeeding with rich and stimulating food. It is also excited by intense heat, and may occur from external violence in the hepatic region, notably a blow or kick on the side, or from being crushed in a doorway or otherwise. The indiscriminate use of calomel, aloes, and arsenic has likewise been known to produce hepatitis.

Symptoms.—Enlargement of the liver is frequently present when the organ is acutely inflamed, and pain is manifested on pressure over it. As the inflammatory action proceeds, the skin and visible mucous membranes assume a dirty-white or yellowish cast, the gums a leaden colour, with an elevated, deep-red line just above the teeth. The evacuations are pale, whitish, or clay-coloured, and vary in consistency. The urine is scanty and high-coloured, frequently turbid or cloudy, in some instances like coffee. Cough and vomiting are usually present, the latter being often mixed with bile, or sediment like coffee grounds. The inspirations in breathing are unusually deep. The tongue is coated with brown fur, and the breath fœtid. Drowsiness is a general accompaniment of hepatitis, and the animal exhibits no desire to cleanse itself or move about. Rapid emaciation takes place, often showing the outline of the tumefied liver. Acute inflammation of the organ, if not removed, may terminate in abscess or chronic hepatitis.

Treatment.—Hot linseed or mustard poultices should be applied over the region of the liver. In

severe cases the fur may be clipped off, and a mustard leaf applied, or iodine liniment, the latter to be repeated for three or four consecutive days.

Medicinally, a small dose of calomel and aloin— $\frac{1}{2}$ grain of the former and 5 grains of the latter—may be given at the onset of the attack, followed in a few hours with a teaspoonful of castor-oil, and subsequently sulphate of magnesia in $\frac{1}{2}$ drachm doses, repeated for three or four days.

If dysentery occurs, $\frac{1}{2}$ to 1 grain of opium may be given, and, should it persist, starch and opiate enemas. The diet should be restricted to milk, with a third of lime-water. Stimulants are not admissible; but if there is much prostration, a little beef-tea (*free from fat*), raw-meat juice, mutton or rabbit broth, may be given in small quantities, and if rejected by the stomach, nutrient enemas should be employed. Kreochyle in teaspoonful doses is usually retained when other agents fail.

Chronic hepatitis is attended with either enlargement or contraction of the liver—usually the former—the organ being hardened, and more or less insensible to pain on pressure. The animal has an habitual jaundiced appearance, is languid, dejected, and subject to attacks of dyspepsia.

Treatment.—Painting over the hepatic region with iodine liniment, and the administration of iodide of potassium daily in 3 grain doses for some time, are the most useful measures to pursue. Once or twice a week $\frac{1}{2}$ grain of calomel, with 5 grains each of rhubarb and aloin, may be administered with benefit. The diet should be plain, unstimulating, and the

bowels properly regulated. Chronic hepatitis frequently, through its interference with the portal circulation, often terminates in ascites, especially in old cats (see Dropsy).

Dropsy.

Aged cats with constitutional disease, and especially with chronic liver and renal affections, are liable to the form of dropsy known as ascites, or abdominal dropsy.

Symptoms.—A uniform and symmetrical enlargement of the abdomen. If the animal is placed on its back, an undulating motion may be perceived on pressing the abdominal walls from side to side. The effusion can also readily be detected by auscultation. Dropsical cats have an anæmic appearance of the mucous membranes, especially the gums, which are of a bluish-white hue. There is a scanty secretion of urine, intense thirst, laboured breathing, which is increased as the fluid accumulates. A standing, sitting, or lateral recumbent position is adopted. Suffocation usually terminates the case, which usually in the latter stage is associated with anasarca—*i.e.*, infiltration of fluid into the connective tissues—when the limbs become swollen and the whole skin more or less puffy.

Treatment.—The patient requires highly nourishing food, and especially mineral tonics and cod-liver-oil. Diuretics are of great service, notably infusion of broom (*Scoparii cacumina*), which may be given in 10 to 15 minim doses with half a teaspoonful of gin in a dessertspoonful of water twice daily; or oil of juniper, 3 to 5 minims, in a teaspoonful of salad-oil

twice daily; or nitrate of pilocarpine, $\frac{1}{8}$ grain, may be used hypodermically every other day. But I consider the first-named the most useful diuretic in feline dropsy. Iodide of potassium in 5-grain doses, continued for some time, has been found useful, especially after tapping.

Tapping in extreme cases may be resorted to; but the operation has usually to be repeated twice or thrice, and then is not always successful, though I have had cases which have made complete recoveries. Where the accumulation is very great, it is not wise to remove the entire fluid at once, the shock to the system being so great that death may occur from collapse. After tapping, a roller bandage should be firmly applied, and a stimulant administered—a teaspoonful of brandy in a tablespoonful of warm milk, strong beef-tea, or a beaten egg. The patient should be kept quiet, and provided with a comfortable, soft bed.

Rheumatism.

Many aged cats, chiefly males, have come under my notice suffering from rheumatism, usually the result of exposure to damp and cold, and generally of a muscular nature, affecting the shoulders or hind-quarters, and sometimes the joints.

Symptoms.—In acute rheumatism the pain is severe, the gait hobbly and stiff, the affected joints hot and painful. The disease frequently moves from one part to another. More or less febrile disturbance is present; the urine is scanty, high-coloured, and cloudy; and constipation is generally present. In muscular attacks confined to the shoulders, stiffness and pain

are manifested, especially if the fore-limbs are extended outwardly. Jumping down from any elevation causes acute pain, and the animal generally lies motionless after the effort. When rheumatism affects the loins (lumbago), the back is arched; the animal has a dragging, paralytic gait; there is extreme tenderness over the lumbar region, with disinclination to move, and sharp, painful mewing on manipulation. The bowels and urine are in a similar condition to that already named.

Chronic rheumatism is not so liable to move its locality, and is less painful than the acute form, but is aggravated by atmospherical changes, and often then assumes an acute type. When confined to the joints, they are enlarged, hot, and knotty.

Treatment.—Complete rest and warmth are necessary in the treatment of rheumatism. Medicinally, alkalines are required. Salicylate of soda, salicylic acid, or salicine, are useful agents; in fact, the salicylate treatment is considered as almost a specific for acute rheumatism in human beings. For cats the dose of either is 3 to 10 grains, given with mucilage or glycerine every three or four hours; in the muscular form of rheumatism salicine may be injected into the affected muscles with benefit. The bowels should be unloaded by saline aperients. Locally, hot soda-water fomentations, and friction with stimulating liniment or neat whisky, afford relief; iodine liniment to affected joints.

In chronic rheumatism the salicylate treatment is also advantageous, and iodide of potassium is useful. Locally, the same measures advised above should be adopted. Belladonna liniment is palliative, but care

must be taken that the patient does not lick the part after being rubbed.

The diet should be chiefly milk and lime-water, and other nourishment of a light and unstimulating nature. When the acute symptoms have subsided, cod-liver-oil and quinine are serviceable.

Cramp.

Cats confined for long periods in small baskets or boxes, and exposed to cold when travelling, may become cramped; but, beyond smart friction, warmth, and exercise, little is required. When due to immersion in cold water, or exposure to intense cold, warmth gradually applied and friction, with the administration of a little stimulant, as warm Bovril or brandy and milk, are advisable measures. Bromide of potassium will relieve acute spasmodic muscular contraction, and may be given in 5 to 10 grain doses.

Cystitis.

Cases of inflamed bladder have occurred in the cat through the injudicious administration of turpentine as a vermifuge; but more frequently they have come under my notice as the result of external violence, or compression on a distended bladder, and obstruction to its evacuation. At the present moment I have a post-mortem specimen before me of a young neuter cat. The bladder is intensely inflamed, and enormously distended with urine. The animal is abnormally fat, the bladder being embedded in adipose tissue, and closely compressed at its neck—hence the retention of urine. Cystitis may also arise through the bladder being complicated with

hernia, and becoming strangulated, a case of which I recorded in 1878.

Symptoms.—Extreme tenderness in the region of the bladder, with heat and fulness; frequent efforts to urinate; a crouching, straddling gait; febrile disturbance and great thirst; and usually obstinate constipation. In the early stage the urine is high-coloured, and subsequently is sanguineous or mixed with mucus and pus.

Treatment.—Hot hip-baths, linseed poultices close up between the thighs, warm gruel enemas, frequent mucilaginous drinks, and opiates, are the measures indicated.

Where retention of urine exists, surgical assistance is necessary, and, as catheterism is not practicable in the cat, direct puncture of the bladder with a fine trocar and cannula affords the only and most speedy relief. The operation is essentially a veterinarian's, and, carried out with due care, is generally successful.*

Nephritis.

This is not of frequent occurrence in cats, and only a few cases have come under my notice which have been due to external violence in the lumbar region, one arising from the animal being gripped across the loins by a dog and shaken.

Symptoms.—Loin pain, aggravated by pressure or

* In a bitch with double ventral hernia, in which the bladder occupied nearly the entire left sac and was greatly distended, I evacuated it on five different occasions by means of a fine trocar and cannula with complete success, which enabled me afterwards to operate on the hernia with satisfactory results. (*Veterinary Journal*, October, 1878.)

exercise ; a stiff gait, resembling lumbago ; frequent urination in small quantities, very hot, high-coloured, and sometimes mixed with blood or casts of lymph, are the chief indications of nephritis. When the urine is entirely suppressed, uræmic poisoning takes place, followed by convulsions and death. In such cases a strong urinal and ammoniacal odour is emitted from the breath and body.

Treatment.—Hot linseed and mustard poultices to the loins, hot hip-baths, or cutting off the fur and applying a mustard leaf. Frequent mucilaginous drinks, milk and eggs, and perfect quietude, are the measures indicated. Constipation should be relieved with oleaginous aperients and warm enemas.

Anæmia.

This condition arises from poverty of blood, due to deficiency of the red globules and albumin, and excess of salts. Anæmia is brought about by negligent care, innutritious and insufficient food, want of pure air and light, and it also follows debilitating diseases and hæmorrhage. In cats that occupy basements or dark warehouses, who frequently breed and have large families, it is common to find some, if not all, of the kittens anæmic.

Symptoms.—The visible mucous membranes, especially the conjunctiva and gums, are pale ; the extremities cold, sometimes swollen ; pulse feeble ; and the animal generally listless and depressed, mewing in a feeble manner, and having but scanty secretions and excretions.

Treatment.—This is comprised in good hygiene, generous and nutritious diet, with vegetable and

mineral tonics. Iron and cod-liver-oil are especially indicated; whilst raw meat is of great value, and should be varied with fish and vegetables. In young, growing animals phosphate of lime mixed with the food is beneficial. A nursing mother should be well nourished, and weaned kittens be supplied sufficiently with pure milk and have free access to fresh air and sun.

Diphtheria.

Apart from the fact that outbreaks of feline diphtheria have occurred, we have to face the unpleasant truth that the disease can be transmitted from the animal to the human subject, and *vice versâ*; and, as children appear more susceptible to contract this serious malady, it is very essential the disease should be correctly diagnosed. There are some authorities—or, at all events, medical writers—who deny the identity of bird or animal diphtheria with the human form. Unfortunately, I have had direct proof in my own family of the contrary;* and, with the abundant

* Some years ago a fowl with putrid sore throat (believed by the owner to be roup) was brought to my house for advice and treatment. One of my sons, now practising at St. Leonard's-on-Sea, was instructed how to dress the throat in my absence. He became a victim to diphtheria, which also attacked (myself excepted) each member of the family, leaving in the youngest a chronic affection of the uvula. The late Dr. Gabb of Hastings was the medical attendant, and brought the circumstances before either the British or some other medical society in a paper which he read. A great number of birds from the same poultry farm succumbed to the same disease.

Osler ('Principles and Practice of Medicine') observes: 'Calves, cats and fowls are subject to contagious membranous diseases, which are, however, not identical with diphtheria in man, and are not communicable to him.'

evidence on record of the transmissibility of anthrax, tuberculosis, glanders, and other specific animal blood diseases to the human subject, it is necessary to take into consideration the morbid conditions of the usually termed 'harmless domestic cat' as affecting the welfare of the household.

Symptoms.—Inflamed and swollen condition of the throat and neighbouring glands; difficulty in swallowing. Spots of a dirty-yellowish or gray exudation may be seen on the back of the palate and throat, which ultimately coalesce, spreading over the back of the pharynx. As the disease advances, this fibroid or membranous coating increases in thickness and firmness of attachment, and has been described as resembling dirty wash-leather. Considerable salivary discharge occurs, which hangs from the angles of the mouth. The breath is extremely foetid, especially when sloughing has commenced; and then a dirty, purulent discharge, frequently mingled with blood, issues from the nostrils. A constant short, choking cough, with retching, is

Lennox Browne, on the other hand, says: 'Nevertheless, seeing that fowls, pigeons and calves, as well as *domestic animals*, are susceptible to the infection of human diphtheria, the possibility of a retransmission of the disease to the human being cannot be denied, and should not be overlooked.'

B. A. Whitelegge, M.D. ('Hygiene and Public Health'), alluding to bovine diphtheria, states: 'Klein has shown that pure cultivations produce by inoculation a constitutional disease in cows . . . and cats fed upon the milk develop in a few days a severe and often fatal illness, apparently identical with that which sometimes affects cats during the prevalence of human diphtheria. In the cat, as in the cow, the lung symptoms predominate.'

invariably present, the creature endeavouring, as it were, to dislodge the diphtheritic deposit. Great prostration, rapid pulse, and frequently low temperature, accompany the disease. Death usually arises from asphyxia. In all cases the lungs are affected, and generally become gangrenous.

Treatment.—If the animal is of sufficient value to incur the risk of infection in treating it, which I doubt, then the same local and medicinal measures adopted in human practice would be applicable; but I avoid mentioning these, and advise destruction, rigid disinfection, and every other means necessary to prevent contagion.

Salivation.

This condition, when associated with any local affection of the mouth or neighbouring structures, is usually an indication of mercurialism. Unfortunately, as with the canine race, mercury, in some one of its compounds, whether for external or internal use, forms one of the pet remedies of ‘cat doctors.’ The red, green, and yellow iodides—notably the latter for eye cases—are especial favourites for external use, and for diseases requiring very opposite treatment these preparations are constantly prescribed—to wit, skin diseases, all of which, in the vocabulary of the quack, are mange—while for alterative, aperient, or emetic purposes calomel is used most indiscreetly.

Symptoms.—In mercurialism the salivary secretion is unusually abundant; the teeth are loose and discoloured; the gums spongy, swollen, and tender, extremely congested, often approaching a purple hue.

The breath is singularly foetid, the tongue loaded with brown fur, and deeply red down the sides. There is little appetite, but excessive thirst.

In severe cases sloughing and ulceration of the mucous membrane of the mouth occurs, and if the mercurial doses have been excessive the stomach and intestines are in a like manner affected, resulting in blood-stained vomits and sanguinary purging.

If suitable measures are not taken to check these effects, considerable irritative fever is established. Extreme debility follows; the coat falls off; the animal becomes rapidly emaciated, tremulous, and paralytic, and dies in convulsions or delirium. Not unfrequently the face is considerably swollen, and the joints are hot and tender.

Mercurialism also gives rise to a species of eczema (*eczema mercuriale*).

Treatment.—The most effectual preliminary antidote for mercurialism is an albuminoid compound—notably the white of egg—to be followed by potassium iodide and saline aperients. See Poisons and their Antidotes.

CHAPTER XIII

ACCIDENTS AND OPERATIONS

FRACTURES AND DISLOCATIONS — AMPUTATIONS —
BURNS AND SCALDS—EMASCULATION—SPAYING—
HERNIA—WOUNDS—BONES IN MOUTH AND THROAT
—NEEDLES—CHOKING—FISTULA—ABSCESS.

Fractures and Dislocations.

FRACTURES are of various character, and are usually divided into simple, compound, and comminuted; transverse, oblique, or longitudinal; complete or partial. In young animals, when a fracture partially occurs—*i.e.*, when the outside of a bone splits away, as in a half-broken twig—it is termed ‘green-stick fracture.’

Deformity, loss of muscular power, pain, swelling, and crepitus, are the usual symptoms of a broken leg.

A cat’s limb may be as readily set as a dog’s. All depends upon the operator and subsequent attention. In years past, when in country practice, many were the cases brought to me of trapped cats with broken and mangled limbs, and, with a few hopeless exceptions, I obtained similar successful results as in canine fractures. In fact, notwithstanding assertions



BLACK AND WHITE NEUTER 'MEPHY' (OLD TYPE).

THE PROPERTY OF MRS. A. M. STEAD.

(From a photograph by E. Norton Collins, S. Norwood.)



'CHAMPION JUDGE BRUIN.'

Winner of numerous Firsts, many Specials, and Medal.

THE PROPERTY OF MISS O. J. M. ROSE.

(From a photograph by Nesbitt and Co., Kilburn.)

to the contrary, cats are particularly patient under suffering. Splints and bandages, rightly applied, are seldom interfered with unless neglected; then puss, like any other creature, human or otherwise, looks after herself. Again, it has been observed cats are not grateful for services rendered in time of need. All I can say is, my experience has proved the direct contrary. They are thankful for small mercies, whatever larder pickings they annex on their own account, and it must be admitted that all cats, more or less, have this little failing. The worn-out argument I have so often advanced still holds good—treat a dumb animal well, and with kindness and humanity, and it will reciprocate it, be it cat or dog, with but few exceptions.

The treatment of fracture consists in reducing the separated portions of bone to their proper position, and maintaining them thus by a retentive apparatus in the form of splints and bandage. The former may be composed of wood, pasteboard, leather, or gutta-percha, the latter being rendered soft by hot water and moulded to the limb. Bandages take the place of splints when soaked in gum, starch, or plaster of Paris.

For limb fracture in cats I prefer thin wooden splints surrounded with lint, and the following method of application is the one I advise: Supposing the fracture (a simple one) to have occurred between the elbow and the carpus, the limb, being extended and held in a straight line, and the ends of the fractured bone in apposition, should be lightly bandaged its entire length. Then four splints, reaching from elbow to foot, should be applied thus: One slightly

broader than the rest to the back of the limb, one down the front, and one on either side. To insure them not slipping out of position, they should be smeared on the inner surface here and there with a little warm pitch—hence the reason of the first bandage, to prevent the pitch attaching to the fur. Having thus adjusted the splints, a bandage is next to be applied with moderate firmness the whole length of the limb. A little cotton-wool packing under the ends of the splints is advisable to prevent chafing, irritation, and sores. Vacant spaces should also be similarly packed to afford a level bearing for the splint, and avoid undue pressure on prominent parts.

The average period in which union is completed in simple fracture is four to five weeks. The animal should be kept perfectly quiet, and only allowed to run about when absolutely necessary. Slitting the outer bandage a little way up at the bottom will relieve any irksome foot pressure or swelling, or, if necessary, the entire bandage may be removed and replaced by a fresh one, with more or less tightening, as the case may require. The ribbed or fluted paste-board used for sending bottles by post forms an excellent all-round temporary support until proper assistance is rendered.

In compound fracture the splints must be so arranged as to allow exposure of the wound when required for dressing. This is especially necessary in compound comminuted fracture, when detached fragments of bone have to be removed.

In fractured ribs a sufficiently broad, stout bandage should be applied firmly round the chest to prevent

the animal dilating the thorax in breathing, and thus continually move the injured ribs. If the end of a broken rib has penetrated the cavity of the chest, care must be taken to guard against the ingress of air.

There are many other varieties of fracture which an amateur could scarcely cope with; therefore I omit a description of them in these pages, advising professional aid to be sought without delay.

Concerning dislocations, which require skilful and immediate attention, and usually anæsthetics, the same advice applies. I will, however, mention three of the most common forms in the cat—viz., those of the elbow, hip, and stifle—leaving it to the good sense of my readers to place such cases in proper hands.

In the first-named injury the humerus should be tightly grasped and firmly held whilst steady traction is brought to bear on the limb below. Sometimes a sudden sharp snatch or forcible jerk downwards will effect reduction. The joint should then be firmly bandaged, and the patient kept quiet in a closed basket.

In hip dislocation the displacement may be upward, downward, forward, or backward. Reduction is performed by powerful traction above the hock in the direction indicated by the dislocation. At the time of traction the limb should be drawn outwardly from the upper part of the thigh for the purpose of lifting the head of the femur over the rim of the acetabulum into the socket. Rotation will sometimes aid the operation. Under chloroform reduction is comparatively easy.

Dislocation of the stifle or patella may occur outwardly or inwardly, and is indicated by an unnatural projection on the affected side, with inability to flex the joint. Reduction is effected by drawing the leg forward, and then with the fingers forcing the patella back into its place. A side-splint should then be applied, and fixed firmly with a pitch bandage round the joint.

Dislocation having once taken place, especially in the stifle, is exceedingly liable to recur. For this reason excitement and unnecessary movements should be strictly avoided.

Amputations.

When disease or injury renders the removal of a limb necessary, amputation has been successfully accomplished in veterinary practice, and notwithstanding the advice given by another writer (not a member of my profession)—‘If a cat’s leg is broken or lacerated by a trap, cut it off. Don’t be afraid. Only leave sufficient flesh to cover the bone, and have ready a strong red-hot wire to cauterize and stop bleeding’—I assert, with considerable warmth of feeling, that the same skill and care adopted in canine surgery is equally demanded in feline surgery.

Everything necessary—tourniquet, chloroform, instruments, ligatures, lint, bandage, etc.—should be provided beforehand and in readiness for the operator, including assistance in the administration of an anæsthetic, and the control of the limb and divided bloodvessels.

Rough-and-ready amateur surgery may be excusable under exceptional circumstances; but even

then the first principles of humanity should have weight with the operator, and reckless mutilation and torture have no part in the act to be performed.

Strict cleanliness and antiseptic dressings are especially necessary with cats in the after-treatment of all wounds, particularly those associated with the above operation. Should secondary hæmorrhage follow amputation, it may be necessary to reopen the wound, and seek for and ligature the bleeding vessel; but moderate or slow hæmorrhage, especially if not arterial, may be allayed by astringent applications, padding, and firm compress.

As this is not intended to be a surgical work, I will merely indicate the necessary measures to be adopted in the case of a smashed limb out of reach of professional help. Suppose it to be a compound fracture of the fore-limb above the knee, crushed, it may be, in a trap, and perhaps still bleeding. A tourniquet placed well above the seat of injury is in the first place advisable, to insure complete pressure on the arterial branches as well as the chief vessel.* The integuments should then be retracted above the seat of fracture—*i.e.*, drawn back, so that when released they provide sufficient covering to the stump. All detached and sharp prominences of bone should be removed, the skin flaps cut even, and neatly drawn together with sutures, after first placing an aseptic pad over the end of the stump, and then a bandage applied.

* In an old work, recently partly re-written, on operations in canine surgery, it is stated 'the bleeding may be stopped by the application of *warm* water'—a novel and contra-indicated procedure to me.

Concerning the after-treatment, as cats cannot be muzzled, it is most necessary that the renewal of the dressings should be carefully pursued, and particularly aseptized.

Burns and Scalds.

Puss, with its love for the fireside, more often gets burnt than scalded, and very deep burns sometimes occur when a live cinder falls on the fur, which more readily ignites than the coat of a dog. A cat aflame is a dangerous creature, for it may rush to any portion of the house, and set fire to other materials.

Treatment.—This chiefly lies in preventing access of air to the injured part, which, after the application of equal parts of linseed-oil and lime-water, should be covered over with cotton-wool. If sloughing follows, poultices and warm emollient fomentations are required.

In severe burns or scalds considerable shock to the system takes place, and it becomes necessary to employ sedative medicines as well as soothing dressings, and to keep the sufferer strictly quiet and comfortable. Especial attention must be paid that the injured parts are neither bitten nor scratched. When there is much destruction of surface, and a considerable blemish follows the healing process, that portion of skin creating the eyesore, particularly if it be on the back, may by careful surgery be removed, and the union of the edges of the surrounding skin so neatly effected as to disguise the fact that puss is so much integument short. This operation I have many times performed with agreeable results.

Emasculation.

This in the cat is performed for the double purpose of increasing the size of the animal and to prevent it playing truant.

The operation is extremely simple, but, nevertheless, should be entrusted to a veterinary surgeon. Whilst under an anæsthetic an incision is made over each testicle, the organs withdrawn, and snipped off about $\frac{1}{2}$ inch above the cord. After-attention is very rarely required, and then only a sponge and some warm asepticized water.

From three to six months is the best age to emasculate if increased growth is the object. For stay-at-home purposes and inoffensiveness, the operation can be performed at any period. I have operated on a great number of adult cats—some advanced in years—without a single untoward result. The operations of twisting the cord and slowly scraping it through, or tearing the testicle away by traction, unless done under anæsthesia, are simply brutal.

Spaying.

Removal of the ovaries is not frequently practised on the cat, and, as I consider the operation (except when necessitated by disease) inhuman and extremely cruel, I purposely omit describing it in these pages.

Hernia.

Umbilical and ventral or abdominal hernia are the two forms most usual in cats, but neither is so frequently met with in feline as in canine practice.

Umbilical hernia usually results from expansion of the navel cicatrix, or the protrusion of omentum or bowel, sometimes both combined, before the navel aperture has closed after rupture of the umbilical cord, and is manifested in the shape of an easily compressible conical tumour immediately over the navel.

Treatment.—Generally in young kittens the convex surface of a rounded piece of cork or pad placed over the navel opening, after reducing the hernia, and retained in position with adhesive plaster, will effect a cure. Otherwise, incising the skin, scarifying the edges of the umbilical ring, and closing it with fine gut sutures, may be adopted with complete success.

Ventral hernia usually arises from sudden or violent strain on an overdistended abdomen, especially if in a weakened condition. The rupture is sometimes associated with, or aggravated by, heavy pregnancy.

Treatment.—This consists in dividing the skin over the site of rupture, returning the protruded organs, and uniting the torn abdominal walls, after first scraping the edges, with uninterrupted gut sutures, and the external wound with interrupted silk sutures. An after-bandage support is advisable.

In advanced pregnancy the injury is more complicated, and it may be necessary to remove the unborn young through the abdominal opening before dealing with the rupture. This, however, is a delicate operation only to be entrusted to an expert in surgery, and which it is unnecessary to describe in these pages.

Wounds.

Cats are liable to various kinds of wounds, which, as in other creatures, may be described as *incised*, *lacerated*, *punctured*, and *contused*.

Incised wounds are most amenable to treatment and rapid healing. After carefully cleansing, the edges are brought together and maintained in position by sutures, which may be of silk, thread, or fine gut. It is advisable to clip off the fur over the surface of the injured part, and thus prevent any getting between the lips of the wound and acting as an irritant. In large incised wounds, to avoid an unsightly after-scar, I find it advantageous to insert intermediate sutures before withdrawing the first ones when they become slack.

Lacerated wounds must of necessity heal by a process of granulation. After the removal of clots, dirt, and any foreign matters, if no secondary hæmorrhage occurs, the wound may be packed with antiseptic dressing, changed every twenty-four hours, or oftener, according to circumstances. In the case of hæmorrhage, astringent applications are necessary, as cotton-wool steeped in tincture of iron or solution of tannic acid. I have plugged such wounds with Petanelle wool with most pleasing results, this agent not only being an effectual styptic, but an excellent absorbent and deodorant, leaving the wound sweet and clean. When no skin is removed, the edges should be brought together with sutures, and so maintained as long as possible, taking care to leave a free passage for the discharge of pus. If the sutures are tied in bows, they can be readily unfastened for

the withdrawal and renewal of the packing, and re-closed. Lacerated wounds from dog-bites should be cauterized.

Punctured wounds are generally very troublesome ; they are more or less of a deceptive nature, for sometimes it is impossible to tell to what extent they go or what foreign matters may be left behind. Thorns, for instance, or the rust off a spike or nail, or a broken splinter of wood, may, from remaining unextracted, produce deep-seated, burrowing abscess, pyæmia, and death. Such wounds, then, should always be carefully examined, and the probe is only a safe explorer in the hands of a professional man. As the orifice of a punctured wound is frequently exceedingly small, the fur around it should be cut off, so that it may not be drawn in or matted, and form an obstruction to the discharge of pus ; this will also facilitate the daily examination and treatment of the wound. If the puncture be in the foot, and there is reason to suppose a thorn, rusty nail, or portion of glass has produced it, poulticing is advisable, with the insertion occasionally of a little caustic. A punctured wound should never be allowed to heal unless the attendant is satisfied it is sound at the bottom ; otherwise, as already observed, deep-seated abscess and sinuses will result. When the opening is small, pus has accumulated, and the swelling above is extensive, it is better to enlarge the wound with a scalpel or lance, and inject it with warm asepticized water.

Contused wounds are best treated with fomentations and poulticing ; if only slight, Nature alone will effect a cure.

In all wounds strict cleanliness and asepticism

should be observed, and where inflammatory fever is present it may be counteracted by light aperient medicine, plain, unstimulating diet, and quietude.

Bones in the Mouth and Throat.

These are a frequent source of trouble to cats, especially fish, fowl, and rabbit bones, the two latter being notably a source of mischief. Numerous cases have come under my notice in which sharp spiculi of bone have been found fixed across the roof of the mouth, between the teeth, or in the throat. Very recently a cat in great distress was brought to me for the extraction of what its mistress supposed to be a loose tooth, but which proved to be a sharp splinter of fowl bone embedded in the gum.

When a cat has a persistent, choking cough, with efforts to dislodge something, and paws at its mouth, a careful examination of the interior should be made. If the bone is low down the throat, and a veterinary surgeon not immediately handy, the best thing is to give a little salad-oil pending the arrival of professional help. Above all, the throat should not be manipulated and pinched externally, as penetration of the sharp end of the bone into the throat or oesophageal structure has through this action frequently been occasioned, and the case in consequence further aggravated.

In all cases, except in the mouth, when the bone can be seen and removed with the fingers or ordinary forceps (sometimes a button-hook is very handy if the bone is across the roof of the mouth), it is safer and wiser to seek the aid of a professional man who has the necessary instruments at hand.

After the removal of a throat-bone, the patient should be fed for a day or two on warm bread and milk, which acts as a poultice, and does not irritate any laceration that may exist. Sometimes, though rarely, the obstruction exists at the lower end of the œsophagus, when it may be necessary to forward it into the stomach by the use of a probang or large-sized gum-elastic catheter, previously giving a teaspoonful of salad-oil. This, again, is essentially a professional man's work.

Needle Injuries.

In my work on 'The Management and Diseases of the Dog,' I have recorded cases of injuries due to the vagaries of a travelling needle in the body, and many similar instances have occurred in the cat. In one case a needle carrying cotton had penetrated between the branches of the lower jaw and transfixed the animal's tongue. In another, irregular swellings appeared and disappeared in various parts of the body. Sharp unaccountable pains, without any warning, were occasionally manifested; ultimately an abscess formed on the side, and when opened a corroded needle was discovered.

My son, writing from St. Leonards concerning cat cases, says: 'I have had one which, at periods varying from three to four months, had abscesses form in different parts of the body without any apparent cause, and which, after lancing and the usual treatment, got well very quickly. In the last one I discovered a needle, and, as there have been no abscesses since, I have no doubt that was the cause. The cat

must have swallowed it, or it had at some time penetrated the skin.'

Choking.

Cats, especially after prolonged starvation, occasionally get choked in swallowing large portions of solid food. In ordinary life this is rarely the result, as the animal is very patient in mastication.

Choking may also occur from a portion of bone becoming fixed in the œsophagus or pharynx.

Treatment.—If the obstruction is not deeply lodged, and can be seen or felt, an attempt should be made to extract it with forceps. An ingenious instrument for this purpose I have had in use for many years. When, however, the substance is too low down for extraction, a teaspoonful of salad-oil should be first given, and then a large gum-elastic human catheter, or whalebone probe having a portion of sponge securely fastened on the end, may be gently passed down to the obstruction, and then steadily pushed onwards. Before, however, attempting this measure, it is advisable to carefully manipulate externally with the fingers, as the obstruction may be of such a nature that external pressure may soften and break it down and facilitate its onward passage. Pins, needles, and other sharp substances may sometimes be removed by rotating the probang and then withdrawing it. Holding the animal up by the hind-legs, head downwards, and giving a sharp smack on the back, will in some cases cause a successful effort to dislodge the obstruction.

Considerable irritation often ensues after choking, and when the lining membrane of the œsophagus

has been lacerated, a great degree of inflammatory action is sure to follow; to subdue both, and act as a local sedative, warm bread-and-milk and mucilaginous broths should for some days afterwards form the sole diet of the animal. (See Bones in the Mouth and Throat.)

Fistula.

Fistula of the anus is not uncommon in overfed cats suffering from constipation and piles, especially if no measures are taken to relieve the latter. The fistula may be external or internal, complete or partial, *i.e.*, external if the orifice of the wound is in the integument, or internal if within the rectum; complete if the two orifices exist together, partial when there is but one orifice.

Symptoms.—Continual irritation of the affected part, which the animal continually licks, and sometimes, like the dog, drags itself along the floor with its fore-limbs. If the fistula is external it requires little diagnosis: a small weeping orifice may be seen, which on passing a probe into it will be found to either end in a blind channel or communicate with the bowel; if internal, and not complete, there is an offensive rectal discharge, and the fæces are often coated with matter and blood. When complete, the end of the probe, passed from without, can be felt in the rectum with the little finger, if able to insert it.

Treatment.—This consists in laying open the sinus with a fine probe-pointed bistoury, and afterwards treating it in the first instance as a common wound, and subsequently by injecting a solution of chloride of zinc. If considerable hæmorrhage follows, the part

should be packed with cotton-wool steeped in tincture of iron or a solution of tannic acid; or if it arises from a divided artery, the vessel should be secured and twisted, or if possible tied.

It is advisable to properly regulate the bowels, and at no time should constipation be allowed to take place; an enema of warm water twice or thrice daily, after hæmorrhage is prevented, should be administered, for the double purpose of facilitating the passage of fæces and removing the discharge.

It is needless to observe the surgical treatment of fistula should only be undertaken by a professional man.

Abscess.

Cats are more or less subject to abscess arising from blows or other injuries (see Needles). Abscess may be either external or internal—usually the former—and very frequently on the head or side of the face when caused by stone-throwing. I have had many cases due to the latter pernicious practice. When an abscess is forming there is considerable heat, swelling, and pain in the affected part, and as supuration proceeds and the matter approaches the surface, it has a fluctuating and ‘throbbing’ feel to the fingers.

Treatment.—This should be directed to the encouragement of speedy development by hot fomentations or poultices, and, when the abscess is matured, evacuation of the contents by lancing. A poultice may afterwards be applied, and the sac syringed from time to time with a weak tepid solution of permanganate of potash or chinosol. If, as in sluggard

abscess, it is necessary to encourage the discharge, a little savin ointment or other stimulating agent may be inserted in the wound. When abscess forms on the jaw or side of the face, an examination should be made of the mouth to see if it arises from tooth trouble, to which attention, if so, should be directed. Abscess may also be associated with mammitis (see Diseases of the Mammary Glands).

Abscess of the pharynx, usually arising from the lodgment of some foreign body, is denoted by a fluctuating tense swelling, with difficulty in swallowing. The head is extended and carried stiffly. Treatment consists in evacuating the matter with the lance or small trocar.



‘PIP’—A STUDY IN BLACK AND WHITE.

THE PROPERTY OF MRS. WELLBYE.

(From a photograph by E. Landor, Ealing.)

APPENDIX

POISONS AND THEIR ANTIDOTES

Arsenic.

POISONING from this drug may arise from its wilful administration for the purpose of destruction, or from excessive doses medicinally prescribed—notably in Fowler's solution—and also from absorption after external application or from licking the dressing.

Actions and Uses.—Administered in excess, arsenic is an irritant poison, otherwise an alterative, tonic, and antiseptic; locally, a caustic, antiseptic and parasiticide. When given in excess, it produces gastro-intestinal irritation, vomiting, difficult breathing, rapid weakened heart action, great prostration, low temperature, black and difficult evacuations, oedematous condition of the body and limbs, delirium, convulsions, coma, and death.

Post-mortem Appearances.—These are similar to those observed in the dog. The stomach (according to the quantity of poison received) is more or less inflamed, softened and thickened, and presents extravasated blood-spots and erosions. In slow poisoning, the latter are most marked, the mucous membrane being also universally purple. Some weeks after death bright yellow spots, as observed in the human subject, have been found inside the stomach; the lungs are usually congested, the liver enlarged and of a greasy consistency. A peculiarity

of arsenic is its mummifying effects on the body after death ; instead of putrefaction taking place, the carcase becomes dry and shrivelled.

Antidotes.—Emetics, followed by moist hydrated peroxide of iron ; magnesia freely given in the absence of iron ; frequent teaspoonfuls of equal parts of salad-oil and lime-water ; mucilaginous drinks, white of egg, barley-water, linseed-tea, milk and isinglass. The animal to be wrapped in a hot blanket.

Dose.— $\frac{1}{10}$ to $\frac{1}{8}$ grain.

Strychnine.

This is perhaps the most common agent in cat poisoning, and frequently occurs through eating mice, and sometimes birds, which have been destroyed by Battle's Vermin-killer. Death may also arise from excessive medicinal doses, and also of compounds containing the drug—notably Easton's Syrup and tincture of nux vomica.

Actions and Uses.—Medicinally strychnine is a tonic, nerve stimulant, and antiparalysant. In excessive doses it produces general rigidity, trembling, intermittent spasmodic muscular twitchings, extending to the glottis, diaphragm, and muscles of respiration, resulting in death by asphyxia.

Post-mortem Appearances.—Blood dark-coloured and unusually fluid, venous engorgement of the lungs, frequently right side of the heart, and large bloodvessels ; redness of stomach and intestines (more pronounced in protracted cases), congestion of brain and spinal cord. The body for some hours after death is stiffened out, with back arched and head thrown back towards the spine, limbs rigidly extended, and tail carried straight out.

Antidotes.—Emetics, infusion of tobacco, extract of hemlock, chloroform, bromide of potassium, and hydrate of chloral. In cats suffering from strychnine-poisoning I have found the greatest benefit from infusion of tobacco given in teaspoonful doses every hour until the spasms cease; and next to this I prefer 5 grains each of bromide of potassium and chloral hydrate in a dessertspoonful of water every hour if necessary. Artificial respiration is also valuable.

Dose.—Strychnine, $\frac{1}{40}$ to $\frac{1}{20}$ grain; liquor strychnia, 1 to 5 minims; tinct. nux vomica, 5 to 10 minims; Easton's Syrup, 20 to 30 minims.

Prussic Acid.

This is the most deadly and instantaneous poison used, and for that reason is most frequently employed by chemists for the destruction of cats.

Actions and Uses.—Medicinally (diluted) it is sedative, antispasmodic, and anodyne. It is fatal in from 1 to 4 drops, placed on the tongue, within the eyelids, or subcutaneously injected, and especially through the walls of the chest. A fatal dose creates sudden giddiness, staggering, violent gasping respiratory efforts, fixed eyes, and usually one painful mew; when the limbs become flaccid, involuntary micturition and evacuation occur, and death takes place, the whole occupying one to two minutes.

Post-mortem Appearances.—More or less venous congestion, especially in the heart; blood generally fluid, and of a bluish appearance if an excessive dose has been given; the odour of the acid is perceptible for some time after death.

Antidotes.—Cold douche over head and neck, bleeding, inhalation of ammonia or chlorine, hypodermic injection

of atropine, galvanism, fresh air, inhalation of oxygen, continued artificial respiration.

Dose.—Medicinal acid (B.P.), 1 to 2 minims.

Carbolic Acid.

Not unfrequently cats become poisoned either from the absorption of this agent when too freely used in skin-dressings, or from licking the same. Hence it should be used with extreme caution.

Actions and Uses.—Medicinally carbolic acid is a sedative, anodyne, astringent, and antiseptic; externally, an antiseptic, deodorizer, disinfectant, caustic, and styptic. In excessive doses it is an irritant poison, causing excitement, dilatation of the pupils, heavy breathing, convulsions, and death. Cats are peculiarly susceptible to the action of carbolic acid; even a single dressing, incautiously applied over a large surface, produces dulness, trembling, and disinclination for food, which may continue for several days (Dun). Stronger dressings within a few minutes cause excitement, blowing, unsteady gait, and occasionally fatal collapse.

Antidotes.—Neutralization of the poison may be effected by administering Epsom or Glauber's salts in warm water, which form harmless sulpho-carbolates. Albuminous matters (white of raw egg) and demulcent drinks should be given freely. Inhalation of sedative steam alleviates the throat and gastric irritation.

Dose.—1 to 3 minims dissolved in 5 minims of glycerine, and given in a little water; useful in continued vomiting.

Phosphorus.

This is usually taken in the form of phosphorus paste (rat poison), which, when spread on bread-and-butter or fish, is readily taken.

Actions and Uses.—Medicinally it promotes the growth and density of bony tissue, and is hence used, especially conjoined with iron, in rickets, bone softening, and malnutrition. Excessive doses cause gastro-enteritis, diarrhoea, and emesis. Persistent vomiting occurs, and if examined in the dark the ejected matter is sometimes luminous. A phosphorous odour may be present in the breath. Death is usually preceded by convulsions and coma, or it may occur from sudden collapse.

Antidotes.—Emetic of sulphate of zinc or ipecacuanha, followed by sulphate of copper, 2 grains in a dessertspoonful of water, which forms an insoluble phosphide; this may be repeated twice or thrice with two hours' interval. Mucilaginous drinks are valuable, but milk, oil, or eggs must be avoided, as they dissolve the phosphorus and facilitate its absorption.

Dose.— $\frac{1}{200}$ grain dissolved in oil or given in a pill.

Lead (Acetate).

The symptoms of lead-poisoning are less pronounced in cats than in other animals, but cases have occurred through licking fresh white paint and drinking water out of paint pots.

Actions and Uses.—Medicinally and externally, astringent and sedative; in excessive doses, corrosive and irritant, giving rise to cramp, paralysis, and convulsions.

Antidotes.—Sulphuretted hydrogen, dilute sulphuric acid, 3 to 6 minims in a teaspoonful of water; iodide of potassium, 3 to 6 grains in water—repeated; sulphate of magnesia, $\frac{1}{2}$ drachm in water. Milk, gum mucilage, white of egg and water, barley-water.

Dose.—1 to 2 grains.

Calomel.

Actions and Uses.—In excessive doses an irritant poison. Medicinally, a cathartic, liver stimulant, alterative, febrifuge, diuretic, emetic, antiseptic, and anthelmintic; externally, sedative and antiparasitic.

Dose.— $\frac{1}{2}$ to 1 grain.

Turpentine.

Actions and Uses.—In large doses an irritant poison, producing gastro-enteritis, inflammation of the kidneys and bladder, and paralysis. Medicinally, stimulant, antispasmodic, astringent, cathartic, diuretic, diaphoretic, and anthelmintic; externally, a counter-irritant and stimulant.

Antidotes.—Mucilage and oil.

Doses.—As an anthelmintic (not advised in cats), $\frac{1}{2}$ to 1 drachm in a dessertspoonful of salad-oil.

Paraffin.

Actions and Uses.—Antiseptic, germicide, vermicide, stimulant, antispasmodic, and hair stimulant. In excessive doses, or through absorption in skin-dressing, causes diarrhoea, wasting, convulsions, coma, and death.

Antidotes.—Emetics and stimulants.

Dose (Petroleum Spirit).—20 to 30 minims in milk or gruel (not advised).

Chloroform.

‘Whenever respiration is impaired, unduly slow, shallow, or gasping, the administration of the drug must cease, fresh air should be freely allowed, the tongue drawn forward, and the head placed on a lower level than the rest of the body. But if natural respiration ceases, not

a moment must be lost in adopting *artificial respiration*. The Hyderabad experiments show that every animal was revived, in which artificial respiration was used, within thirty seconds after natural respiration ceased, in some cases in which it was used after fifty seconds, but in none in which the treatment was delayed for sixty seconds after respiration stopped. When the pulse and heart had ceased to beat, neither artificial respiration nor other remedies, however promptly used, were effectual in restoring life. In such emergencies, faradic stimulation of the phrenic nerve and inhalation of amyl nitrite may aid in restoring respiratory movements' (Dun).

In apparent death, I have frequently, by rapid artificial respiration, application of ammonia to nostrils, syringing the face with cold water, the use of blow-bellows, and the battery, succeeded in restoring the animal after much longer intervals than above quoted. In operations on cats, a mixture of chloroform and ether is preferable to chloroform.

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